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**LANGUAGE**

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

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

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

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

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The official currency in Romania is RON.

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

**TIME**

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

**COFFEE BREAKS**

Coffee, tea and water are served during morning coffee breaks and are free of charge to all registered participants.
SCIENTIFIC PROGRAM
THURSDAY, APRIL 11TH 2019

WELCOME ADDRESS

08:50 – 09:00

SESSION 1, CHAIRPERSONS: Nicole von Steinbüchel (Germany), Johannes Vester (Germany)

09:00 – 09:20
Results of the CAPTAIN II trial - a new horizon in TBI treatment
Dafin F. Mureșanu (Romania)

09:20 – 09:40
Function - or impairment - oriented neurorehabilitation: more than a philosophical question
Volker Hömberg (Germany)

09:40 – 10:00
Patient-reported and performance based outcome after TBI – European experiences from Center-TBI
Nicole von Steinbüchel (Germany)

10:00 – 10:20
Towards a new gold standard to improve TBI clinical research – the multidimensional approach and the CAPTAIN series of trials
Johannes Vester (Germany)

10:20 – 10:30
Discussions

10:30 – 11:00
COFFEE BREAK
SESSION 2, CHAIRPERSONS: Volker Hömberg (Germany), Max Hilz (Germany)

11:00 – 11:20  Baroreflex dysfunction is more severe in patients with a history of moderate or severe TBI than in patients after mild TBI
Max Hilz (Germany)

11:20 – 11:40  Creativity and brain
Karin Diserens (Switzerland)

11:40 – 12:00  Challenge neurosurgery – interaction, precision & vision
Christian Matula (Austria)

12:00 – 12:20  Prolonged disturbances of consciousness after brain injury signifies a challenge both diagnostically and therapeutically
Heinrich Binder (Austria)

12:20 – 12:30  Discussions

12:30 – 14:00  LUNCH BREAK

SESSION 3, CHAIRPERSONS: Ștefan Florian (Romania), Christian Matula (Austria)

14:00 – 14:20  Education in neurotraumatology (NT) – time for action
Martin Rakusa (Slovenia)

14:20 – 14:40  Is cranioplasty a simple procedure?
Ștefan Florian (Romania)
14:40 – 15:00  TBI trigger or aggravating factor in Alzheimer’s disease?  
A.V. Ciurea (Romania)

15:00 – 15:10  Discussions

SESSION 4, CHAIRPERSONS:  Gelu Onose (Romania),  
A. V. Ciurea (Romania)

15:10 – 15:30  Diagnosis and initial management of mild traumatic brain injury: variability of clinical presentation and accuracy of diagnosis  
Yuri Alekseenko (Belarus)

15:30 – 15:50  Actual synthetic overview on main traumatic spinal cord injury current issues – as basis and rationale for a brief, in advance, awareness about our initial endeavors to approach its clinical relation with chronic ethanol consume  
Gelu Onose (Romania)

15:50 – 16:10  Enhanced processing of data on association of maxillofacial trauma and TBI improves outcome  
Mihaela Băciuț (Romania)

16:10 – 16:30  Early rehabilitation of severe brain injury: a dynamic field  
Dana Boering (Germany)

16:30 – 16:40  Discussions
FRIDAY, APRIL 12TH 2019

09:00 – 10:00 ROUND TABLE DISCUSSIONS
TBI burden worldwide – overview of the current situation around the globe at country level

CHAIRPERSONS: Peter Lackner (Austria), Jongmin Lee (South Korea)

10:00 – 10:20 Study methodology and data break
Dafin F. Mureșanu (Romania)

10:20 – 10:40 Disorders of consciousness - potential advances in treatment
Jongmin Lee (South Korea)

10:40 – 11:00 Efficacy of Cerebrolysin in severe traumatic brain Injury: A multi-center, retrospective cohort study
Lynne Lucena (The Philippines)

11:00 – 11:20 Outcome prediction in TBI – determinants and future perspectives
Peter Lackner (Austria)

11:20 – 11:50 COFFEE BREAK

11:50 – 14:00 GROUP WORKSHOP

14:00 – 15:30 LUNCH BREAK

15:30 – 17:30 CAPTAIN TRIAL ADVISORY BOARD
ABSTRACTS
About 80-90% of traumatic brain injury incidents are classified as mild traumatic brain injury (MTBI). The diagnosis of MTBI is usually complicated, because the majority of MTBI symptoms are mainly of a subjective and reversible character. Besides there are some interfering factors which significantly influence the patients’ triage and the accuracy of MTBI diagnosis. The assessment of the main signs and history in MTBI patients in different settings remains a challenge.

The main purpose of this presentation is to clarify the significance of some diagnostic criteria and improve the use of modern standard diagnostic protocol for initial diagnosis and management of MTBI patients and further optimisation of the program of advanced training of medical specialists.

Several critical points in regard to initial MTBI management in specialised and general medical practice can be identified:

- initial examination of patients with MTBI, including history taking and assessment of possible trauma mechanism;
- the evaluation and appropriate interpretation of posttraumatic consciousness and especially memory disorders;
- indications and timing of the appointment of CT, MRI and skull radiography;
- time and scheme of admission to hospital;
- significant individual variations in clinical presentation of MTBI;
- concomitant alcohol intoxication and some non-neurological conditions;
- the assessment of the probability of early intracranial complications and remote consequences such as posttraumatic head-ache, posttraumatic seizures or cognitive disorders.

Individual variations in clinical presentation of MTBI and reliability of diagnosis is usually associated with age of patients, mechanism of trauma, history of the accident, presence of traumatic signs of head soft tissues, disorders of consciousness and amnesia at the moment of accident, patterns of posttraumatic headache and some other symptoms, concomitant alcohol intoxication and somatic disorders, and time of admission to hospital. Special MTBI diagnostic algorithm based on time scale and constellation of different symptoms allows us to classify the diagnosis of MTBI
in three categories of reliability: significant (62%), probable (25%) and possible or doubtful (13%).

There is some heterogeneity of MTBI with different patterns of clinical presentation which determines the patients’ triage and general scheme of management and should be taken into account in application of diagnostic protocols in different settings. Time scheme of admission to hospital significantly influence the accuracy of MTBI diagnosis. Optimal time for assessment and confidential diagnosis of MTBI seems to be the first three days after the trauma. The time of admission is significantly influenced by the character and dynamics of the main clinical manifestations (loss of consciousness, amnesia, headache, etc.) and concomitant alcohol intoxication. The signs of head trauma (abrasions, bruises) as an indirect evidence of a probable MTBI and alcohol intoxication as an interfering factor should be considered in the diagnostic protocol. Besides we need a special postgraduate advanced training programs for different categories of medical specialists including general practitioners.

ENHANCED PROCESSING OF DATA ON ASSOCIATION OF MAXILLOFACIAL TRAUMA AND TBI IMPROVES OUTCOME

MIHAELA BĂCIUȚ
GRIGORE BĂCIUȚ, DAFIN MUREȘANU*, CRISTIAN DINU
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Worldwide studies estimate an average 12% coexistence of maxillofacial trauma with TBI in patients presenting in emergency departments (Huang). Outcome significantly depends on the correct estimation and inventory of lesions, but this often unfortunately remains an outstanding question. It is of paramount importance to include etiologic factors (interpersonal violence, falls – predominating in patients after 50 years of age, road traffic accidents), demographic properties and fracture patterns in the judgment leading to management decision (Arslan).

Our study points out the most important factors and parameters contributing to comprehensive diagnosis:

- clinical neurologic examination, attributed score on Glasgow Coma Scale
- CNS evaluation prioritization concomitantly with respiratory and cardiovascular urgency
- clinical maxillofacial evaluation
• simultaneous head and facial computed tomography - otherwise erroneous diagnosis, missing facial fractures (Huang)
• subsequent monitoring of early or late complications: infection and inflammation, neurological deficit, physiological dysregulation and facial bone deformity (Salentijn)

Improved knowledge on trauma patterns can accelerate decision making in the hospital team (maxillofacial surgeon, neurologist, neurosurgeon, ENT surgeon, ophthalmologist). Thus, association of TBI was found with maxillary, nasal, zygomatic, mandibular, frontal and NOE (nasoorbitoethmoidal) fractures and was established statistically (Arslan).

Since neuroinflammation can cause acute secondary injury after TBI (Simon), and can lead to chronic neurodegenerative diseases, appropriate use of neurotrophic regulation peptides has been proven to support healing through multiple regeneration mechanisms, including targeted immunomodulation, offering premises for recovery of the patient.

Our aim was to deliver improved treatment protocols, offering emergency and elective surgical- as well as drug-based therapy, based on assimilated evidence that correct case assessment leads to a comprehensive diagnosis enabling proper selection of treatment.

The extent of injury to vital structures and expertise of the multidisciplinary team are the essential factors dictating the prognosis.

References


PROLONGED DISTURBANCES OF CONSCIOUSNESS AFTER BRAIN INJURY SIGNIFIES A CHALLENGE BOTH DIAGNOSTICALLY AND THERAPEUTICALLY

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

The first question is the description of the problem: Specifically, it is about quantitative clouding of consciousness lasting more than 4 weeks. Unfortunately different terms not clearly defined are used for the quantitatively different types of disorders of consciousness. This is largely due to the fact that one was concerned during the past with unstructured narrative phenomenological behavioral description. This has led to even today common symptomatically condensed terms of minimally conscious state (MCS) and vegetative state (VS), apallic syndrome (AS) or unresponsive wakefulness syndrome. Thus to work vagueness out ordinal scaled scales also to document chronological sequence were developed such as DOCS, CRS-R or INNS. The pivot of all these scales is the evaluation of vigilance and arousal based on spontaneous and apppellative communication or interaction with the environment. But there are two points of criticisms: Lack of interaction or communication is not indicative of mental states, their qualia and thoughts. Moreover in many cases communication is impossible because of constraints as amaurosis, deafness, disturbances of sensibility and not at least paralysis. This is confirmed meanwhile by refinement of electrophysiological as well as neuroimaging methods. The next question is for the cause. It is about detection of morphological and pathophysiological consequences including degeneration and regeneration of brain injuries as they have been described many times.

Combining all told in a hypothesis is the final major challenge. Meanwhile there are relatively concrete ideas of the two determining constituents of quantitative disorders of consciousness (arousal and awareness). These are known as nodules and cell assemblies interspersed throughout brainstem, thalamus and cortex and their interconnections used to communicate biochemically and electrically. Both widely scattered lesions of this network as well as those only one or a few hubs affecting can make an impact.

The choice of therapy depends on the localization of the lesion inside the network and how it is possible to repair or to replace the failed function. For that are a number of pharmacological as well as invasive or non-invasive neurostimulation choices.
Up to now unfortunately the published results are inconsistent to put it mildly. There are many reasons for: These include irreversible and unsubstituable lesions of crucial hubs, such as brain stem or thalamus on the one hand, or the breakdown of a critical mass of the whole network. Not least to this day it lacks for complete knowledge of the complex interaction within the consciousness network which is required for external modulation interventions. Therefore it is awkward difficult and sometimes never possible to positively influence all relevant failures or disorders with the current available restorative or modulatory methods.

Nevertheless to achieve success cannot be ruled out with one or another method provided a complete inventory of the lesion pattern and valuation of his conscious relevant impact to be able for targeted intervention.

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**EARLY REHABILITATION OF SEVERE BRAIN INJURY: A DYNAMIC FIELD**

**DANA BOERING**

*Department of Neurology, SRH GBW Bad Wimpfen, Germany*

Traumatic brain injury remains nowadays the number one cause of mortality and disability in young adults in modern western societies. There is growing scientific evidence that individuals with severe TBI who receive early rehabilitation beginning in the acute medical level of care have better outcomes than those who do not. Moreover, recent study results suggest that reduction of medical problems and thus increasing medical stability during early rehabilitation correlates with time spent in rehabilitation, not with time since injury, outlining the beneficial role of active medical management provided in the early rehabilitative phase.

Yet early rehabilitation of severe TBI patients remains very challenging. Prerequisite of it is a complex setting providing multidisciplinary expertise, systematic monitoring, complex diagnostic resources, and specialty consultants available. It’s cornerstone remains minimizing medical complications and enhancing recovery by pharmacological, electrophysiological and neurobehavioral interventions. Recent research encompasses systematically the high complexity of medical complications in severe TBI patients admitted to early rehabilitation and their time course. Medical assessment of these complications requires special expertise, because these patients have a range of complications specific for this patient group. Therefore neurologic, neurosurgical as well as rehabilitative expertise is needed to tailor the management strategy which allows medical stabilization and rehabilitation as well.
Besides specific neurorehabilitative interventions including verticalization, physiotherapy, tracheal tube management and structured sensory stimulation, there is an expanding body of evidence about the effectiveness of pharmacologic neuromodulation employed to improve arousal, promote behavioral incentive, stimulate speech, and reduce agitation: CNS stimulants as well as CNS depressants. Other current neuromodulatory techniques like rTMS/tDCS need further research concerning target patients and interaction profile; perhaps future research will enable us to distinguish genetic marker for treatment responder, similar to oncologic treatment strategies.

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**TBI TRIGGER OR AGGRAVATING FACTOR IN ALZHEIMER’S DISEASE?**

A.V. CIUREA

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Introduction: Alzheimer disease (AD) is a neurodegenerative disorder marked by cognitive and behavioral impairment that significantly interferes with social and occupational functioning. AD is an incurable disease with a long preclinical period and progressive course. Alzheimer disease (AD) is the most common form of dementia. In the United States alone, approximately 6.08 million Americans had either clinical AD or mild cognitive impairment due to AD in 2018. AD and other dementias are more common in African Americans than in whites. According to the Alzheimer’s Association, in the population aged 71 years and older, African Americans are almost twice as likely to have AD and other dementias as whites (21.3% of African Americans vs 11.2% of whites). Alzheimer Europe estimates the number of people with dementia in Romania in 2012 as being 270,304. This represents 1.26% of the total population of 21,387,517. The number of people with dementia as a percentage of the population is somewhat lower than the EU average of 1.55%.

Alzheimer’s Disease (AD) is the scourge of the century. AD has varied etiology, dichotomized by genetic contribution. Familial AD (FAD), caused by coding region mutations in three genes, is quite rare and characterized as a Mendelian form. The vastly more prevalent late onset AD (LOAD), is genetically complex and also implicates non-genetic factors as etiologic contributors.
Mild to moderate traumatic brain injury (TBI) appears to underline some later forms of cognitive impairment and dementia and neuropathologically define chronic traumatic encephalopathy (CTE). While both AD and CTE share beta-amiloid deposition and tauopathy, the anatomic distribution are distinct.

Material and methods: A continuum exists between the pathophysiology of normal aging and that of AD. Next elements take a part in the pathophysiology: cholinergic neurotransmission, amyloid hypothesis and Tau hypothesis. Other hypothesis involve granulovacuolar degeneration and neuropil threads, oxidative stress and damage, clusterin, presenilins, estrogen loss and inflammatory reactions.

The authors studied a cohort of 111 patients with traumatic brain injury between 2013-2018 in Sanador Clinical Hospital, Bucharest, Romania. From them we selected 19 patients with those features:

- age, all between 65-73 years old;
- who apparently had minor craniocerebral trauma by falling from the same level or other level;
- with Glasgow Coma Scale Scores between 14 and 12;
- with associated pathologies – HTA, coronary and cerebral vascular disease, DZ and dyslipidemia, obesity;

We excluded all patients with car accidents and with traumatic brain injury -Glasgow Coma Scale under 12 and also multiple trauma.

None of the patients had clinical Alzheimer’s Disease phenomena at first examination. The monitoring of these cases performed in the same department of neurosurgery, neurology neuroradiology revealed the occurrence of AD phenomena. Those were confirmed in time by the neuroimaging changes, due to the hippocampal modification.

Conclusions: Any kind of trauma in people aged over 65 can cause or aggravate the neurodegenerative AD phenomenon by passing from the preclinical phase to the clinical phase. Under these conditions, we consider that all AD connections and trauma are perfectly correlated. The probability of AD in these patients is explained by the presence of minor trauma during the preclinical period of the disease and by the damage made to the profound memory circuits Papez.

TBI belongs to the group of etiopathogenic diseases of AD (DZ, HTA, atherosclerosis). Our advice is that all patients with TBI should undergo careful and accurate monitoring and to initiate AD prevention in time.
KEY WORDS: Alzheimer’s Disease, Traumatic Brain Injury, neuroimagery, neurodegenerative disorder;

Bibliography:


CREATIVITY AND BRAIN

KARIN DISERENS*
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Creativity is at the origin of our civilizations and a defining characteristic of what makes us human. Yet, while it is at the summit of human mental ability and central to senses, we know next to nothing about the cognitive and neural mechanisms that generate creative thinking.

In contrast to other domains of psychology and neuroscience, we do not have, at this point, a single cognitive or neural mechanism how the brain generates creative ideas and to explain the extraordinary creative capacities of an Einstein or a Shakespeare. However, it is uniformly agreed that creativity is a complex and multifaceted construct that can manifest itself in a myriad of different ways. There have been several attempts to split creativity into subtypes. The most influential type is the concept of ‘divergent thinking’, defined as the ability to generate multiple solutions to an open-ended problem. In recent studies, cognitive neuroscience has
focused on the results of neuroimaging for a better understanding of the neuronal networks underlying creative behavior. New theoretical frameworks for creativity, as with the definitions of consciousness and coma, advance the field by providing a solid theoretical rationale to investigate the domain in a more circumscribed way.

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**IS CRANIOPLASTY A SIMPLE PROCEDURE?**

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Introduction: Considered by many neurosurgeons a straightforward technique, cranioplasty is not at all a surgical intervention without possible complications and even deaths related to it (up to 3.6%). This topic raised up an increased interest only in the last decade, and especially in the last four years a large body of literature was published on topics like Types of complications, factors influencing failure, timing of cranioplasty, safety of simultaneous VPS and cranioplasty and not the last on surgical experience. All this aspects are presented in respect of the main’s author experience.

Material and Method: A retrospective study between 2006-2017 on a cohort of 378 operated cases by the main author out of 467 cranioplasties performed in the Neurosurgical Department of Cluj-Napoca in the same period. A statistical analysis was performed regarding demographic data, indications and types of cranioplasties, complications and their relation with different prognostic factors.

Results: Peak incidence was different according to the etiology of cranial defect, pecking in the second decade for trauma cases, in the fifth and sixth decade for tumor cases and in the fifth decade for vascular cases. The large majority of cranioplasty were indicated for tumor cases (67.8%), especially for retrosigmoidian approach, when the cranioplasty was made concomitant with the primary operation (91% of cases), being followed by the trauma cases in large majority due a decompressive craniectomy, cranioplasty being performed a second surgery in 58% of cases. Regarding the vascular cases, cranioplasty was made a second operation in 71% of cases. The overall rate of complication was 10%, with no significant correlation between initial pathology, age, material or gender and complications (Chi square test, p>0.05). But there were significantly more complications for frontal location.
of defect (OR=4.36, 95% CI [0.95; 19.99], $X^2=4.26$, $p=0.03$) and late cranioplasty:
(OR=2.45, 95% CI [1.19; 5.04], $X^2=8.22$, $p=0.012$). We encounter No mortality related
to cranioplasty in our series.

Conclusions: Cranioplasty is not at all a simple surgical technique and we cannot
underestimate the importance of timing, location, accurate surgery and the role of
experience of surgeon. Consensus recommendations are under publication, with
the hope that with a more standardized management, the risk of complications
will decrease

BAROREFLEX DYSFUNCTION IS MORE SEVERE IN PATIENTS WITH A
HISTORY OF MODERATE OR SEVERE TBI THAN IN PATIENTS AFTER
MILD TBI

MAX HILZ$^{1,2}$
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Background: We previously found that patients with a history of mild traumatic
brain injury (post-mTBI patients), have a delayed blood pressure (BP) decrease upon
Valsalva maneuver (VM) induced baroreceptor-loading, indicating a compromised
baroreflex-mediated sympathetic withdrawal. Given the more severe cerebral
lesions in patients with a history of moderate or severe TBI (post-mod-severe-TBI),
we hypothesize that baroreflex-dysfunction is more severe in post-mod-severe TBI
patients than in post-mTBI patients

Methods: 14 post-mod-severe-TBI patients (32.2±10.5 years; 9 women; 10-76
months post-injury-interval), 22 post-mTBI patients (35.6±13.2 years; 7 women;
4-98 months post injury-interval); and 29 healthy controls (31.3±12.2 years; 9
women), performed 3 VMs from which we calculated intervals from the highest
systolic BP (BPsus)-value after strain-release to the time when BPsus had fallen
by 90% of the difference between peak-phase-IV-BPsus and baseline-BPsus
(90%-BPsus-normalization-times), and velocities of BPsus-normalization, defined
as change in BPsus related to the 90%-BPsus-normalization-time (90%-BP-
normalization-velocities), as indices of sympathetic withdrawal. To compare patients and control data, we used one way ANOVA.

Results: The 90%-BPsys-normalization-time was significantly longer in the post-mod-severe-TBI patients (25.9±12.7s) than the other groups (P=0.02) but still longer in post-mTBI patients than in controls (18.3±4.1s vs 25.9±12.7 s; P=0.02). In post-mod-severe-TBI patients, the 90%-BPsys-normalization-velocity was significantly lower (2.02±1.3mmHg/s) than in healthy controls (3.77±1.7mmHg/s; P=0.00) but did not differ from velocities in mTBI patients (2.89±1.1mmHg/s; P=0.15) which again were lower than those of the controls (P=0.003).

Conclusion: While autonomic dysfunction is common after acute TBI, our data show that baroreflex-mediated sympathetic withdrawal after VM remains compromised for extended periods of time after TBI and is more severe in patients with moderate or severe TBI than with mild TBI.

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FUNCTION - OR IMPAIRMENT - ORIENTED NEUROREHABILITATION: MORE THAN A PHILOSOPHICAL QUESTION?

VOLKER HÖMBERG
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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.

Nevertheless the question remains if we have really made progress to influence impairment by restorative strategies rather than just improving function and consecutively participation by compensatory strategies. This is more than just a “philosophical” question because the necessary strategies may be different, following different neurobiological and behavioural rules. We have been very enthusiastic in successfully adopting elementary rules derived from basic work on motor learning into motor rehab by optimizing trajectories in patients who have maintained the ability to move at all (at least a little bit), but we don´t really know if such “task-specific” motor learning is effective in people who cannot move at all.
Are we really able to influence impairment?

First published in 2008 (Prabhakaran et al 2008) described an interesting phenomenon: The spontaneous impairment recovery after stroke at day 90 after the ictus (with or without treatment) for upper extremity was usually 70% of the maximum possible difference between initial score and the maximum possible. There were outliers from this rule attributable to severe pathology in the primary descending motor tracts especially the corticospinal tract. In the meantime this “proportional recovery rule was also demonstrated to apply for impairments in non-motor domains as neglect and language abilities (Lazar et al 2010, Marchi et al 2017). If this 70% proportional spontaneous recovery is a universal rule and cannot be influenced, this of course would mean that impairment oriented rehab is not possible. The challenge is to change the slope (i.e. from 70% to 80% or more) or to make outliers inliers.

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

So far only three major strategies have been shown to help decrease impairment in the subacute stage e.g. after stroke:

1) 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).

2) The use of pharmacological agents: antidepressants were shown to be effective in the FLAME trial with fluoxetine (Chollet et al 2011). This could however not be corroborated in subsequent trials with larger sample size using SSRIs as citalopram (TALOS trial) and fluoxetine again (FOCUS trial). Recently the CARS trial (Muresanu et al 2016) documented for the first time after decades of frustrane attempts to achieve some sort of neuroprotective and/or neurorestorative effects that a multimodal drug can improve impairment after stroke. This was further corroborated in a consecutive trial (Guekt et al 2017) and further corroborated by a metaanalysis of stroke related trials with cerebrolysin (Bornstein et al 2018). The CAPTAIN trial looking at cerebrolysin effects in TBI in a multidimensional approach is on the way.

3) Possible additional candidates for a true “impairment” oriented treatment approach are neuromodulatory techniques such as peripheral neuromuscular and/or sensory stimulation (e.g., whole hand subliminal “mesh-glove” stimulation) and more and more also non invasive brain stimulation techniques such as repetitive transcranial magnetic stimulation and transcranial DC stimulation. Also the use
of non fatiguable robotic devices to enable a high intensity massed movement treatment appear promising.

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. Today, 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 have clever, economically feasible, approaches to increase the net number of therapy or activity hours per day by creating true “enriched environment” for severely impaired patients. They should enable 6-8 hours of daytime treatment to avoid leaving our patients “inactive and alone” in future.

References:


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**OUTCOME PREDICTION IN TBI – DETERMINANTS AND FUTURE PERSPECTIVES**

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Due to the complexity of traumatic brain injury (TBI), outcome prediction for individual patients is a big challenge. After the trauma, many factors are influencing the further course of the disease. Hence not only the initial clinical presentation, secondary brain injury or systemic complications during the acute phase of TBI but also timing and intensity of neurorehabilitation are known determinants of outcome. A better knowledge of the processes is crucial for the development of new treatment strategies and management concepts. However, due to patient heterogeneity, large cohorts are needed to identify solid outcome predictors. The international initiative for Traumatic brain injury research supports the further development of common data elements for TBI as a method for international comparative effectiveness research (CER). First CER data from large international studies are available and will be presented. In addition future perspectives on what we can derive from this data will be discussed.
Severe acquired brain injury has profound impacts on alertness and cognition. A certain portion of survivors fail to fully recover and develop a disorder of consciousness (DOC) ranging from a comatose state or vegetative state to a minimally conscious state. In addition to the devastating results on the quality of life of the patients, the families and caregivers are struck by the emotional and financial consequences of these conditions.

Vegetative state (VS)/unresponsive wakefulness state (UWS) is a dissociative state of wakefulness without awareness. Otherwise, minimally conscious state (MCS) is a clinical condition characterized by markedly diminished consciousness with minimal reproducible signs of awareness of oneself or the environment. Patients may emerge from VS to MCS, and MCS to confusional state. Although there are no definitive treatment options for DOC, advances in pharmacological and nonpharmacological treatments have been developed with the growing understandings of the condition. The best studied pharmacological treatments are amantadine and zolpidem, which showed effectiveness in several case series and randomized controlled studies. Other drugs such as apomorphine, levodopa and methylphenidate have also shown some beneficial effects. Examples of nonpharmacological treatments include deep brain stimulation, transcranial direct current stimulation and multimodal sensory stimulation.

A combination of pharmacological or nonpharmacological treatments is another option for consciousness recovery. Cerebrolysin is a neuropeptide preparation with neurotrophic effects as well as neuroprotective. Combination treatments with cerebrolysin and amantadine showed better recovery when compared with amantadine single treatment in DOC patients and may be a promising treatment option.
EFFICACY OF CEREBROLYSIN IN SEVERE TRAUMATIC BRAIN INJURY: A MULTI-CENTER, RETROSPECTIVE COHORT STUDY

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Background: Severe traumatic brain injury patients with non-operative management of lesions are known to have a poorer prognosis. Recent as well as ongoing clinical studies have been exploring the utility of Cerebrolysin in improving patient outcomes among TBI patients, however, limited studies are available on the efficacy of Cerebrolysin among non-operative severe TBI patients.

Objectives: To determine the effects of Cerebrolysin as add-on therapy to the standard medical decompression protocol for non-operative severe TBI patients.

Methodology: The study employed a retrospective cohort design and included 87 severe TBI patients with a GCS score of 5 to 7 on admission. In addition to the current medical decompression protocol for severe TBI, 42 patients received 30 ml/day Cerebrolysin for 14 days followed by a subsequent dosage of 10 ml/day for another 14 days. The control group included 45 patients who received the standard decompression protocol only. Primary outcomes evaluated were the proportion of patients achieving a GCS ≥9 and Glasgow Outcome Score (GOS) ≥4 at Day 21. Length of hospital stay and in-hospital mortality were used as secondary outcome measures. Stata MP version 14 was used for data analysis.

Results: Compared to the control group, a significantly higher proportion of patients who received Cerebrolysin treatment achieved a favourable outcome at Day 21 post TBI with an 87% vs 50%; p<0.00001) and GOS ≥4 (39% vs 18%; p=0.043). The mean length of hospital stay (LOS) was approximately 7 days shorter in Cerebrolysin group (25.61 days vs 31.92 days; p<0.00001), and a significantly lower proportion of Cerebrolysin patients had a LOS ≥30 days (Cerebrolysin: 13%; Control: 51%; p<0.00001). No significant group differences were seen in the in-hospital mortality rate.

Conclusion: Cerebrolysin is beneficial for severe TBI patients with non-operative lesions as evidenced by higher improvement in GCS/GOS and shorter length of hospital stay as compared to standard treatment alone.

Keywords: Cerebrolysin, Severe Traumatic Brain Injury, Glasgow Coma Score, Glasgow Outcome Score, disability, neurorehabilitation, clinical outcome, neurorecovery, functional recovery
What makes neurosurgery so special and probably slightly different to other disciplines? It is the challenge of what we are doing in this field that has always represented this subject in its breadth and versatility, which Neurosurgery always was faced with and will continue to do in the future. From the interaction based on innovation, via precision formed by perfection towards vision via translation, this will be the key areas of the present talk.

The neurosurgeon always has been a kind of interface within the interdisciplinary community. It has been in 1904 when Anton von Eiselsberg successfully has operated the first documented brain tumor in Europe and he did that together with his friends Julian Tandler, the anatomist and Otto von Marburg, the neurologist. The anatomist showed him WHERE to operate, the neurologist WHY he should do it, and the neurosurgeon knows HOW he can make it. The perfect interdisciplinary symbiosis and team spirit! Neurosurgery always has been a huge innovative field reflecting the close fusion of innovation with direct application and efficient further development on the basis of gained experience. Hereby Anatomy has always been one of the key factors above all, the real applied anatomy, means anatomy with immediate clinical relevance. One of the biggest challenges in neurosurgery is orientation in some very narrow and deep access pathways surrounded by the most difficult functionally important structures, or in the depth of the brain where any orientation because of the lack of anatomical landmarks is very difficult. Optimized imaging based on fused image datasets is today an essential part of day-to-day clinical operations! “Information at a glance” with implementation of MRI, fMRI, iMRI, CCT, CTA, SPECT, PET, DTI, CSI with hot spot, 5-ALA, etc. as the basis for intraoperative navigation has become nowadays more or less in combination with the functional monitoring (cortical & subcortical stimulation) the standard of surgical treatment! Another key step has been the early recognition of the need to transfer from an “open” surgical system to a “closed” surgical system. It’s all about the value of information. Even the best information is worthless if it comes too late. Vice versa the fastest information sometimes even can be lethal for the patient if it comes fast, but unfortunately is wrong! The “Circle of Surgery”, the surgeon sees something, he thinks about it and then (hopefully) acts accordingly. Everything that speeds up the circulation makes it more efficient and can only be good for the patient! The well-known slogan “Time is brain” is reflecting all that in a special way and formed the basis for any kind of intraoperative imaging (CCT, ultrasound, MRI, etc.). From innovation to precision! Neurosurgery is a highly precise surgical field that, with the constant development of its technical capabilities, is able to
perform even highly complex procedures with tremendous precision and safety for the patient! Quite essential was the effort to get away from the sometimes highly aggressive, often disfiguring surgical interventions with high frequent loss of function, towards less aggressive endoscopic techniques with perfect esthetic results and preservation, respectively improvement of function! However, one challenge is certainly the transfer of “knowledge” or achievements. It would be foolish not to acknowledge that we already have fulfilled the step towards to biological approaches. The translation has started in the beginning of the early 80s, but somehow still stands in the realm of the beginning! It is slow and costly, but unstoppable and certainly the topic of the future in our specialty! There is no doubt that these biological approaches are the future of cancer research and possibly of cancer therapies! It’s not for nothing that the Nobel Prize for Medicine in 2018 was awarded for research on checkpoint inhibitors and it shouldn’t make wondering that immunotherapy has been called the “Breakthrough of the year” by leading scientific journals! Biological research has become one of the key technologies can be a guarantor for clinical success.

Neurosurgery as a discipline fulfills a strategic perfect position! Not only as a “cell supplier”, but as a bridging agent creating the real chance for translational biological research on the basis of understanding clinical relevance!

RESULTS OF THE CAPTAIN II TRIAL - A NEW HORIZON IN TBI TREATMENT

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Background and aims: Traumatic brain injury (TBI) is a leading cause of injury-related disability and death worldwide. In 2016, an estimated 27 million new cases of TBI we added to the global burden. The CAPTAIN-RO trial enriches compelling evidence that currently exists for Cerebrolysin, an approved agent for neuroprotection and neurorecovery after TBI in many countries, using a novel approach: multidimensional analysis.

Methods: The study is an interventional, randomized, double-blind, controlled, single-center trial. The full protocol is available for consultation in the ISRCTN registry (no. 17097163). General and neurocognitive outcomes after TBI were measured using full scales, avoiding dichotomization of variables. The multidimensional analysis
opens a new direction for clinical and statistical thinking in neurorehabilitation by adding precision to the measurement of complex health states for TBI.

Results: A total of 142 patients aged 19-79 with a diagnosis of TBI and a GCS score between 7-12 at the time of hospital admission were enrolled. Baseline, day 10, 30 and 90 assessments were collected using nine scales that measured cognitive function and emotional status.

Conclusion: CAPTAIN-RO is one of the first trials in TBI history with a truly multidimensional approach based on full outcome scales. We believe this strategy is superior to the single criterion paradigm, commonly used in neuroprotective treatment research. This trial delivers a unique perspective to decades of well-established positive effect trends of Cerebrolysin. These will be extensively discussed and evaluated for implications concerning future TBI research upon completion of data analysis.

Keywords: Randomized Controlled Trial, Traumatic Brain Injury, Multidimensional Analysis

ACTUAL SYNTHETIC OVERVIEW ON MAIN TRAUMATIC SPINAL CORD INJURY CURRENT ISSUES – AS BASIS AND RATIONALE FOR A BRIEF, IN ADVANCE, AWARENESS ABOUT OUR INITIAL ENDEAVORS TO APPROACH ITS CLINICAL RELATION WITH CHRONIC ETHANOL CONSUME

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This work presents a synthetic up-to-date literature review on main traumatic spinal cord injury (TSCI) current issues (focusing, according to their importance, on epidemiological and morph-/path-physiological – especially complex/ subtle – aspects, including as rationale) and also – in a brief awareness on it – our expertise, regarding a related quite surprising fact: the neuro-functional status and evolution after recent TSCI are better in chronic alcoholic drinks consumers than in similar patients who do not have this vice.
Trying to conceptually document, practically objectify and in sum, to understand this rather paradoxical clinical observation, we have updated our knowledge about (mainly connected) actual aspects of TSCI, and then, have achieved a first – of a series – paper, containing, on this (extremely in brief reminded in there) basis: bibliographic findings and consequent assumptions on possible interactions of chronic ethanol consume with TSCI pathways and respectively, initial/ preliminary comparative data in between the two specified kinds of patients.

So, following the above mentioned theoretical updates concerning TSCI, we herein also summarize, with the permission of the journal where this research is submitted for – hopefully soon – publication, some key points of the endeavors we have, in this respect, performed by now [collection of information about the alcohols chemical family and their basic actions on the nervous system – as generally determined, but also the ones we could identify in relation with TSCI – and an adequate patient quartation/ selection, based on a narrative chronic alcoholism diagnosis – and partly on the Short Michigan Alcoholism Screening Test – and respectively, on the American Spinal Injury Association Impairment Scale, including with the associated Frankel grading – scores – all primary data appropriately statistically processed], aiming to stimulate the scientific interest for – we consider – such a quest worthy matter and also for the respective article of ours.

Key words: traumatic spinal cord injury (TSCI), chronic alcohol consume, neuro-functional status and evolution, American Spinal Injury Association Impairment Scale (AIS), polyethylene glycol (PEG)

EDUCATION IN NEUROTRAUMATOLOGY (NT) – TIME FOR ACTION

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Background: NT is taking together hospitalization, outpatient care, rehabilitation and indirect medical costs (including loss of productivity) among the diseases with the highest annual costs. Despite the clinical and societal impact of TBI, young neurologists do not have enough opportunities for formal training in this neurological topic. Aim of our survey was to evaluate motivation, knowledge and obstacles in treating patients with NT causes among young European neurologists and propose how to improve the training.

Methods: we included 163 neurologists (108 women, 66%) from 32 European and three Mediterranean countries. Survey consisted of fifteen questions testing
both knowledge and exploring opinions; nine questions were multiple choices, the maximum score was 9 points.

Results: the mean age of the participants was 29.9 (SD 4.5) years. The majority were residents (40%) or consultants (36%) (up to 5 years of post-academic experience). They had at least one patient with traumatic brain, spine or peripheral nerve injury per week in their daily practice (42%). More than half (55%) didn’t have any formal training and 79% were certain that the diagnosis and treatment of NT patients will improve, if neurologists become more involved.

In practical test no one achieved 0 or 9 points. Four scored one and 17 achieved 7 (mean 4.6; SD 1.5). Eighty percent of participants felt that they don’t have enough knowledge to comfortably treat their patients. Almost all (98%) were willing to get more practical training mostly in form of teaching sessions (33%) or focused workshops (37%).

Conclusions: our results clearly indicate that young European neurologists need and wish to improve their knowledge in the field of Neurotraumatology. Since little formal training exists, teaching sessions and focused workshops at (inter)national congresses may be a first step to improve education in this field.

PATIENT-REPORTED AND PERFORMANCE BASED OUTCOME AFTER TBI – EUROPEAN EXPERIENCES FROM CENTER-TBI

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Background: CENTER-TBI is a large, prospective, observational European study that includes a pragmatic data collection of all patients after traumatic brain injury (TBI) (registry: N>22,000) and a core data study (N>4500) with extended, in-depth data collection. It is designed to improve disease characterization, clinical, health-related quality of life, cognitive, and psychosocial outcome assessment and outcome, and care for patients after TBI. Original instruments were translated into 18 languages, internationally harmonized, and psychometrically validated. Recovery patterns of HRQOL, post-concussion and post-traumatic stress disorder symptoms, cognition, and psychosocial outcome, including effects of selected predictors are reported.

Methods: For international language validations, classical and modern test
theoretical methods were applied to assess quality of translations and meaningfulness of data aggregation over outcomes. For longitudinal analyses of outcome at 3, 6 and 12 months post injury a mixed modelling approach was used. To predict outcomes at 6 month, linear and (cumulative) mixed logistic regression models were applied.

Results: Many, yet not all of the psychometric characteristics of translated instruments were similar and invariant across languages. Possible impact on outcome analyses were put into perspective. Most outcomes show significant, yet small improvement between 3 and 6 months with little change thereafter. Uni- and multivariate analyses of predictors (age, gender, GCS pre-injury mental health status) especially indicate a strong negative effect of preinjury mental state on outcomes.

Conclusion: Investigating and facilitating comparability of patients’ responses across translations may enhance the meaningfulness of results of internationally pooled data, our understanding of the association of TBI with outcomes will be improved. Results stress the requirement for additional psychological care to improve patients’ lives after TBI.

TOWARDS A NEW GOLD STANDARD TO IMPROVE TBI CLINICAL RESEARCH – THE MULTIDIMENSIONAL APPROACH AND THE CAPTAIN SERIES OF TRIALS

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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”.

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.

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.

Examples from the literature and current study designs in neurosciences are discussed and their implications related to future developments. Currently, one of the most promising TBI clinical trial approaches, with cutting edge state of the art methodology, is the series of CAPTAIN trials - the first true multidimensional approach in TBI history based on full outcome scales.

Key Words: Clinical Research, TBI, Multidimensional, Methodology
CURRICULUM VITAE
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Dr. Yuri Alekseenko graduated from Vitebsk State Medical University in 1981. Then he has postgraduate training in residency in clinical neurology and research course (PhD) at Vitebsk State Medical University, Vitebsk, Belarus.

Many times he participated in national and international advanced postgraduate training and research courses in Belarus, European countries, EAN and WFN congresses, International teaching courses on neurology.

Since 2001 he is a Chairman of University Department of Neurology and Neurosurgery, Vitebsk State Medical University (Belarus) and Consultant-Neurologist of Vitebsk Regional Clinical Hospital.

Dr. Alekseenko participated in different professional Societies and Committees. He is a Chairman of Vitebsk Regional Society of Neurologists, member of Scientific Board of Vitebsk State Medical University, Management Committee member of Belarusian Scientific Society of Neurology, National Delegate in European Academy of Neurology, member of EAN Scientist Panel on Neurotraumatology, Society for the Study of Neuroprotection and Neuroplasticity, Central and East European Stroke Society etc. Dr. Alekseenko has significant contribution to the editorial, translating and publishing activity, collaborates with some scientific journals and publishing companies. He is an editor and translator of some international handbooks on neurology in Russian.

Total list of publications includes 260 articles, reviews, book chapters, monograph, textbooks and manuals for medical students and physicians. He is co-author of international EFNS guidelines on mild traumatic brain injury etc. The sphere of scientific interests: neurotraumatology, mild traumatic brain injury, headache and other pain syndromes, multiple sclerosis, stroke and cerebrovascular disorders, cognitive disorders, alcohol-related neurological disorders, neuroprotection, clinical neurophysiology, psychophysiology, computer technologies, medical and neurological education. Dr. Alekseenko has more than 15-yers experience in conducting of the international multicenter clinical trials in neurology.
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Oral Implantology, 1994, Microsurgery, 1994, International Cancer Management Course,
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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

HEINRICH BINDER
AUSTRIA

Professor Binder was born in 1947. 1972 He completed his medical training at the Vienna medical university. After that he started his residency training at the Vienna neurological clinic guided by Franz Gerstenbrand. He received a comprehensive training including also pediatric neurology. But from the beginning, the training focus was on intensive care medicine and and rehabilitation of the most serious brain damaged patients.
1978 he completed his residency training. After that he was employed as senior physician at the Vienna Neurological clinic. Research priorities have been neurological intensive care and early rehabilitation. Therefore he was charged with ongoing services of all intensive care units of the Vienna medical university. By the way from 1975 he was also involved on constitution of the computertomographic unit there. Additionally as consultant he was in charge for 5 Viennese pediatric hospitals and one orthopedic hospital till the early 90s.

1982 because of several years of research at a high level 1982 venia decondi as a process called habilitation comparable an associate professor in North America was conferred. The heading of his habilitation dissertation was “Coma hepaticum”. 1988 he was invested with the university professorship. The heading of his habilitation dissertation was “Coma hepaticum”. 1984 as senior staff member he established the first neurological ICU at the Viennese neurological clinic.

Unrewarding organization and general lack of knowledge about the need for neurological rehabilitation led to the founding of the ÖGNR together with Franz Gerstenbrand 1985. Afterwards until 2008 he was secretary general and from 2008 to 2015 he was president and up to now he is board member of the society in charge of education. During this time he represented the OEGNR in the WFNR and took over the chairmanship of the SIG for spinal cord which he has rescinded in the meantime and the SIG for early rehabilitation. 2010 he organized the 6th WCNR in Vienna with over 1600 professional attendants from 71 countries. 1989 as chief physician he took over the management of the Neurologic Hospital “Maria Theresien Schlössel” in Vienna - a Rothschild foundation. From then on the former general neurologic/psychiatric hospital developed into a rehabilitation clinic with main focus on rehabilitation of long lasting severe disorders of consciousness. 2002 under his leadership the Hospital was expanded and affiliated as neurological center in the huge Otto Wagner Hospital. 2016 he has retired.

In the early nineties of last century a hard case of high spinal cord injury special case of high traumatic cross-section was the reason for additional intensive engagement in rehabilitation of spinal cord injuries. And this why it came to contact and further cooperation with Milan Dimitrijevic from Baylor College of Medicine in Houston. At that time Dimitrijevic was not only a specialist in spinal cord injury but also a pioneer of restorative neurology. 1994 together with Franz Gerstenbrand they founded in threes the Ludwig Boltzmann Institute for restorative Neurology and Neuromodulation which Binder chaired until 2007. During this time, an increasingly intensive cooperation among the Institute as well as the neurological center and the Center for Medical Physics and Biomedical Engineering (Prof. Drexler) and the Institute of Analysis and Scientific Computing (Prof Rattay) of the Technical University Vienna developed till this day. This was the reason why spinal cord was the research focus at last.

2006 during the WCNR in Hongkong for the first time under debate with Mike Barnes president of WFNR, the idea of an international specialized training in neurorehabilitation emerged. This topic was taken up by the then WFNR general secretary Volker Hömberg. With his
support after intensive deliberation, the EFNR was founded by Binder and Gerstenbrand in 2009. Binder took over the presidency from 2009 till 2014 and organized the 3rd ECNR 2015. During this time the main task was the development and implementation of a European curriculum in Neurorehabilitation. In Austria the training according to the curriculum was introduced during his presidency. Also in Romania it was immediately implemented by Prof. Dafin Muresanu in annual teaching courses which Binder regularly participates in lecturing. Binder is member of the management board of WFNR, EFNR, OEGNR, the managing board of the International Danube Symposium. He is also chairman of the SIG “early rehabilitation” of WFNR. He lectures regularly at WCNR, EFNR and congresses or workshops with topics from his special field of research. He has published more than 140 articles about neurological intensive care and neurorehabilitation in brain and spinal cord injury. Below of them are 30 chapters in textbooks and handbooks.

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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

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
PROFESSIONAL EXPERIENCE

1997-Prezent  Profesor of Neurosurgery
University of Medicine and Pharmacy “Carol Davila” Bucuresti
Doctorate Coordinator (11 finished PhDs and seven ongoing, unfinished doctorates)

2004-2008  Pro Dean
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Member of the University Senate (2004-2008)

2009-Prezent  Scientific Researcher First Degree (by national neurosurgical competition)

EDUCATION AND TRAINING

1974  Doctorate in Medicine – PhD.

1979-Prezent  MD Neurosurgeon (National neurosurgical competition)

2007  Master of Science degree in the Management of the Health System (M.Sc.)

PUBLICATIONS
149 articles published with ISI Thompson indexing ;119 published with PubMed indexing
and 57 indexed BDI
Main author of 35/ team of authors 18 treatises and monographs, published in Romania

SPECIAL PUBLICATIONS
• Tratat de neurochirurgie, Ciurea AV, Editura Academiei Romane, 2007
• Intracranial Hypertension, M. St. Iencean, Ciurea AV, Nova Biomedical, New York, 2009

RESEARCH
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IMPORTANT AWARDS
“Avicenna” award, granted by Prof. Dr. M. Samii on the occasion of the 5th WFNS Symposium, Teheran, 2016
“Excellence in Health” award granted by the Ministry of Health 2015
Health Gala Trophy for “Innovation in Medical Education”, 2011
The “Health Merit” Medal awarded by the President of Romania, Ion Iliescu by decree 1090 din M. Of. No. 1179 from 13.12.2004
The Medal “Merit for Education” Class II, granted by the President of Romania, Ion Iliescu by Decree 1097 M. Of. Nr. 1181 din 13.12.2004

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11 Universities (ex: Harvard University - Boston; INI - Hannover; Mercer University – Atlanta)

MEMBER OF EDITORIAL BOARDS AND SOCIETIES
16 important speciality Journals (ex : World Neurosurgery – USA ; Neurosurgery - USA)
21 memberships (World Federation of Neurosurgical Societies, Romanian Academy of Medical Sciences, European Association of Neurosurgical Societies, etc.)

SPECIAL SCIENTIFIC CONTRIBUTIONS
Unitube drain – Registered patent at OSIM with no. 00994 / 2005
Coordination of construction of the Center of Excellence in Neurosurgery 2005 (under the Ministry of Health`s patronage)
Hidden Anatomy of Michelangelo (Certificate of Innovation registered at OSIM, 2012)
Specialist in neurology, physical medicine and rehabilitation. Co-creator of the Swiss Society of Neurology, head of the post-acute neurorehabilitation clinics (1996-2005), before leading a mobile team of neurorehabilitation in the University Hospital (2006-2009) and becoming head of the Transversal Acute Neurorehabilitation Unit of the division of Neurology, Department of Clinical Neurosciences, University Hospital in Lausanne. After contributing to quality criteria of acute and post-acute neurorehabilitation in Switzerland, my current research goals concern the evaluation of diagnosis of disorders of consciousness and the effect of neurosensorial stimulation and hyper-acute mobilization using robotic mobilization via a brain-computer interface in the acute phase. As a Private Docent created the teaching program in this domain for the pre-graduate and post-graduate training of medical students and interdisciplinary professionals. Cognitive approaches to creation and emotion is a central focus of my research for development of treatment techniques and motivation of the acute neurorehabilitation teams.

EDUCATION
2014-present: CHUV, Lausanne: Médecin adjoint, Department of Clinical Neurosciences (Prof. R. Frackowiak, 2016 Prof Ph. Ryvlin) / Neurology (2016 Prof. R du Pasquier)
2009 – 2014: CHUV, Lausanne : Médecin associé, Department of Clinical Neurosciences (Prof. Frackowiak)
2006 – 2008: CHUV, Lausanne : Médecin associé, Maître de Recherche et Enseignement, cMER I, Neurology (Prof. Bogousslavsky, Prof. a.i.) Neuropsychology and Neurorehabilitation (Prof. Clarke)
2002 – 2005: CHUV, Médecin associé, Neurology, “FNR” (Filière de Neuroréhabilitation) (Prof. c. Bogousslavsky, Prof. Clarke, Prof. So)
2001 – 2002: CHUV, Lausanne (Médecin associé) and HUG, Geneva (Medecin adjoint) : Project Manager for the creation of a neuro re-eduction itinerary in hospitals (CHUV) and for out-patients (Geneva)
1996 – 2000: Clinique Valmont, Glion s/Montreux : Médecin chef and medical director
PROFESSIONAL AND ACADEMIC EXPERIENCE

ACADEMIC DEGREES

PD, Privat Docent, 2015 (University of Lausanne)
Maître d’Enseignement et Recherche, 2005 (University of Lausanne)
Doctorate, 1984 (University of Mainz, Germany)
Federal Diploma of Medicine, 1985 (University of Lausanne)
Diploma of Medicine, 1984 (University of Mainz, Germany)

SPECIALIST QUALIFICATIONS

Board Certification Swiss Medical Society (FMH): Neurology, 1994; Physical Medicine and Rehabilitation, 2002; Certificate in Electrophysiology (EMG)

DISTINGUISHED MEMBERSHIPS

Since 2016 Co-chair of Coma Panel EAN
2015 Committee member of EFNR
November 2014 member of the Academy for Multidisciplinary Neurotraumatology Committee of Neurological Behaviour Society

GOVERNING ACTIVITIES

Co-creator of the Swiss Neurorehabilitation Society (1997)
Co-creator of the quality organisation in this domain (APEQ, KIQ)
Expert in the Swiss National group on acute neurorehabilitation, DRG in Bern: definition of standards and acceptance of “Acute Neurorehabilitation” in the University Hospital of Lausanne as quality reference to analyse the cost weight of “acute neurological and neurosurgery rehabilitation”

Creation of the first convention between invalidity insurance and University hospital for the reinsertion of the adolescents with neurological deficits
ȘTEFAN FLORIAN
ROMANIA

Prof. Ioan Stefan Florian, MD, PhD is professor and head of department of Neurosurgery at the University of Medicine and Pharmacy “Iuliu Hatieganu” Cluj-Napoca, Romania, senior neurosurgeon and head of department of Neurosurgery at the Cluj County Emergency Hospital, Cluj-Napoca, Romania. He is also Corresponding Member of the Romanian Academy of Medical Sciences and Past President of the Romanian Society of Neurosurgery. Internationally, he is President of EMN (Euroacademia Multidisciplinaria Neurotraumatologica) and Second Vice President at large – East Europe of WFNS.

As a senior neurosurgeon, up to now, he performed over 16,000 surgeries, with no less than 750 surgeries per year in the last 5 years. His main areas of interest are aimed at the cerebrovascular pathology, neuro-oncology and paediatric neurosurgery.

MAX HILZ
GERMANY

Studied medicine at the Universities of Cologne and Erlangen-Nuremberg in Germany. He first trained in Anesthesiology and Intensive Care Medicine and in Ear-Nose-and-Throat diseases, and then started his residency in Neurology and Psychiatry at the University of Erlangen-Nuremberg.

He specialized in Neurology, Clinical Neurophysiology, Neurological Intensive Care Medicine and Disorders of the Autonomic Nervous System (ANS). He holds German board certificates in Neurology and Psychiatry and in Psychotherapy. He also passed the board examination of the American Board of Electrodiagnostic Medicine.
He is licensed to practice medicine in Germany, the United Kingdom, and in the State of New York, USA.

From 1992 until 2013, he was Attending and Full Professor of Neurology, Medicine and Psychiatry at New York University, New York, NY. Until 2007, he also served as the Associate Director of the Dysautonomia Evaluation and Treatment Center at New York University. In 2006, he was offered an Endowed Chair and tenured Professorship at New York University. From September 2016 to August 2017, he was the Chair in Autonomic Neurology, and Director of the Clinical Department of Autonomic Neurology at the University College London, Institute of Neurology, Queen Square, London, UK.

Until April 2019, he was Professor of Neurology at the University of Erlangen-Nuremberg in Erlangen, Germany. Since June 2015, he is also Adjunct Professor of Neurology at Icahn School of Medicine at Mount Sinai, New York, NY, USA.

From September 2016 to August 2017, he was the Chair in Autonomic Neurology, and Director of the Clinical Department of Autonomic Neurology at the University College London, Institute of Neurology, Queen Square, London, UK.

Professor Hilz has trained many students and fellows from all over the world, including fellows of the Chinese Scholarship Council. He is a member of 17 national and international scientific societies and is on the board of several autonomic nervous system societies. He currently co-chairs the Autonomic Nervous System Subspecialty Panel of the European Academy of Neurology, EAN. He also is Past-President of the German Autonomic Society, Past-President of the European Federation of Autonomic Societies, and Past-Chair of the Autonomic Section of the American Academy of Neurology. He is ad hoc reviewer for more than 25 international scientific journals, a member of the editorial board of Clinical Autonomic Research, and Associate Clinical Editor of Autonomic Neuroscience: Basic and Clinical.

He co-authored the guidelines of the German Neurological Society on syncope, the guidelines on erectile dysfunction and the guidelines of the German Diabetes Society on diabetic neuropathy. He has published more than 300 original and review articles in peer-reviewed journals and chapters in textbooks and presented his work at several hundred scientific conferences.

Prof. Hilz is experienced in the examination of small nerve fiber diseases and disorders of the peripheral and central autonomic nervous system, including hereditary sensory and autonomic neuropathies, diabetic neuropathies, and Fabry disease, and central autonomic disorders. He studied the pathophysiology of Familial Dysautonomia, also known as Hereditary Sensory and Autonomic Neuropathy Type III, of Fabry disease, and the effects of brain lesions of various etiologies on the central autonomic network and on autonomic function.

He also served as an advisor to the European Medicines Agency, EMA, on issues related to autonomic nervous system dysfunction.
Prof. Hömberg had his medical education at the Universities of Düsseldorf, Freiburg and Boston Massachusetts. After spending electives in Neurology at Boston City Hospital and the National Hospital for Nervous 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 Heinrich Heine University in Düsseldorf. He was also founding Director of the NTC in Cologne. He was involved in the setup of many in-and outpatient rehabilitation hospitals in Germany. In 2001 he 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 General for the World Federation of Neurorehabilitation (WFNR) for more than 12 years and is Vice President of the European Federation of Neurorehabilitation Societies (EFNR).

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

He is regular (co) -programme chairman for neurorehabilitation for major international meetings as the World- and European Neurorehabilitation 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 epistemology, neurological music therapy and pharmacology in neurorehabilitation.
**PETER LACKNER**  
AUSTRIA

Assoc.-Prof. PD Dr. Peter Lackner is head of the Department of Neurology at Otto-Wagner-Hospital, Vienna, Austria. The focus of the Department is post-acute long term care after critical neurological insults (stroke, traumatic brain injury) as well as long term neurocognitive rehabilitation in an outpatient setting. Prof. Lackner is a trained specialist in neurocritical care and has a long lasting publication record in clinical and experimental research done in the field.

**JONGMIN LEE**  
SOUTH KOREA

**EDUCATION**  
1. 1983-1989: Seoul National University College of Medicine, Seoul, South Korea, M.D.  
2. 1992-1994: Seoul National University College of Medicine, Seoul, South Korea, M.S.  
3. 1997-2000: Seoul National University College of Medicine, Seoul, South Korea, Ph.D.

**PROFESSIONAL TRAINING**  
1. 1989-1990: Internship, Seoul National University Hospital, Seoul, South Korea  
2. 1990-1994: Residency, Department of Rehabilitation Medicine, Seoul National University Hospital, Seoul, South Korea

**ACADEMIC AND CLINICAL APPOINTMENTS**  
1. 1999-2002: Assistant Professor, Department of Rehabilitation Medicine, Dongguk University College of Medicine, Gyeongju, South Korea  
2. 2003-2005: Visiting Scientist/Postdoctoral Research Associate, Department of Neuroscience, Weil Medical College of Cornell University at Burke Medical Research Institute, White Plains, NY, USA  
3. 2005-2010: Associate Professor, Department of Rehabilitation Medicine, Konkuk
University School of Medicine, Seoul, South Korea
4. 2010-Present: Professor, Department of Rehabilitation Medicine, Konkuk University
School of Medicine, Seoul, South Korea
5. 2005-Present: Chairman, Department of Rehabilitation Medicine, Konkuk University
Medical Center, Seoul, South Korea
6. 2009-2016: Vice Director, Institute of Biomedical Science and Technology, Konkuk
University, Seoul, South Korea
7. 2012-2014: Vice President of Research, Konkuk University Medical Center, Seoul, South
Korea
8. 2015: Visiting Scholar, Department of Biomedical Science, College of Medicine, University
of Central Florida, FL, USA
9. 2018-Present: Dean, Konkuk University School of Medicine, Seoul, South Korea

ORGANIZATIONS
1. Korean Academy of Rehabilitation Medicine, Fellow Member (1994-Present)
2. Korean Stroke Society, Regular Member (2005-Present)
3. Korean Society for NeuroRehabilitation, Regular Member (2007-Present)
4. American Society of NeuroRehabilitation, Regular Member (2010-Present)
5. Society for Neuroscience, Regular Member (2011-Present)
6. Korean Stroke Society, Member, Board of Directors (2010-2012, 2018-Present)
7. Korean Academy of Rehabilitation Medicine, Member, Board of Directors (2012-2016,
2018-Present)

RESEARCH AREA
1. Animal models of stroke recovery
2. Biomarkers of stroke recovery
3. Stroke and brain injury rehabilitation
4. Assessment of disorders of consciousness

LYNNE LOURDES LUCENA
PHILIPPINES

Lynne Lourdes N. Lucena, MD, FPCS, FAFNI
Nellie Kellog Van Schaick Scholar at University of the Philippines College of Medicine
Intarmed Class 1991,
Recipient:Golden Scalpel Award for Neurosurgery, (serving Bicol Region),
Chair - Philippine Board of Neurological Surgery, Inc.
Secretary of the Board of Directors of the Academy of Filipino Neurosurgeons Inc.

International Faculty and Speaker - ICRAN -WFNS International Conference on Recent Advances in Neurotraumatology March 6-10, 2019, Peshawar, Pakistan

Speaker /Lecturer-Women in Neurosurgery/ World Federation of Neurosurgical Societies 2017 (Istanbul),
Recipient of International Scholarship from Turkish Neurosurgical Society and World Federation of Neurosurgical Societies 2017

Recipient of 2016 Greg Wilkins -Barrick Chair Visiting International Surgeon Award given by American Association of Neurological Surgeons and WINS(Women in Neurosurgery)

International Basic Neurosurgery Course Scholar 2013( Antalya, Turkey)
President-Philippine College of Surgeons, Bicol Chapter-2005, Secretary -Board of Governors Philippine College of Surgeons 2006, President- Rotary Club of Naga 2005, Deputy District Governor 2008
Group Study Exchange Team Leader - South Africa
Member- WFNS-WHO Liaison Committee on Global Neurosurgery
Member- Women in Neurosurgery-ACNS
Poet/Author- “Windows to my Soul” . Collection of Poems , 2018

Dr. Christian Matula serves as Professor of Neurosurgery at the Neurosurgical Department, Medical University of Vienna, Austria. He represents the position as the director of Skull Base Division and Head of the Neurotrauma. From an international perspective he is currently holding the position of a Vice President and one of the Founders of Board of Global Neuro, an independent foundation aiming to improve quality of life for patients suffering from neurosurgical disorders. He is also holding the position of a member of the Educational Committee of the World Federation of Neurological Surgery (WFNS) and is also actively involved in the European Association of Neurological Surgeons (EANS). In addition to that he is the medical director of two private health care centers, in Vienna and another one in Lower Austria.
Dr. Matula received his M.D. degree in 1986 from the University of Vienna, Austria, fulfilled his Ph.D. in Neuroendoscopy in 1996 and has been appointed as Professor of Neurosurgery in 1997 at the same University. He has completed long-term foreign visits ("fellowships") with special focus on Neuroanatomy in Würzburg, Skull Base Surgery in Washington and Vascular Surgery in Phoenix. Dr. Matula has developed an international reputation in Skull Base Surgery with special focus on Endoscopic Skull Base Surgery, Neuroendoscopy and in the area of Neurotrauma. In general, his major interests always have been new surgical technologies and the clinical implementation of those techniques. He has organized more than 120 workshop and courses worldwide and has given more than 400 invited lectures as visiting professor all over the world. He is the author of more than 300 publications mostly on microsurgical techniques, skull base surgery, neuroendoscopy, neurotrauma and education and training in Neurosurgery. His scientific work includes several textbooks, atlas but also interactive electronic publications. As director of the educational program for neurosurgery at the Medical University of Vienna he has initiated a variety of well-known seminars and played a major role in developing and enhancing the neurosurgical educational program at his Medical University. He is member of several International Neurosurgical Societies so as the Austrian, German and Swiss society and recipient of several awards and honors.

DAFIN F. MUREŞANU
ROMANIA

Professor of Neurology, Senior Neurologist, Chairman of the Neurosciences Department, Faculty of Medicine, “Iuliu Hatieganu” University of Medicine and Pharmacy Cluj-Napoca, President of the European Federation of Neurorehabilitation Societies (EFNR), Co-Chair EAN Scientific Panel Neurorehabilitation, Past 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 member of 17 scientific international societies (being member of the American Neurological Association (ANA) - Fellow of ANA (FANA) since 2012) and 10 national ones, being part of the executive board of most of these societies.

Professor Dafin F. Muresanu 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. Muresanu 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 Neurotraumatology (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 400 scientific participations as “invited speaker” in national and international scientific events, a significant portfolio of scientific articles (190 papers indexed on Web of Science-ISI, H-index: 20) as well as contributions in monographs and books published by prestigious international publishing houses.

Prof. Dr. Dafin F. Muresanu has been honoured with: „Dimitrie Cantemir” Medal of the Academy of The Republic of Moldova in 2018, Ana Aslan Award 2018 - “Performance in the study of active aging and neuroscience”, for the contribution to the development of Romanian medicine, National Order “Faithful Service” awarded by the President of Romania in 2017; “Iuliu Hatieganu” University of Medicine and Pharmacy Cluj-Napoca, Faculty of Medicine, the “Iuliu Hatieganu Great Award 2016” for the best educational project in the last five years; 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, “Iuliu Hatieganu” University of Medicine and Pharmacy 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.

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 Ultrasonography (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 Commit-
  tee 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

- 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, in 4 modules/ submodules of it: (Clinical
  Assessment of Patients with SCI; Assistive Technology Module and Mobility & seating sub-
  module; Management of neurogenic bladder; Physiotherapy Module and Physical therapy
  perspectives on rehabilitation sub-module

  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 books

- 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 Neurorehabilitation (WFNR) - a member of the Council/Management Committee
  - International Society of Physical and Rehabilitation Medicine (ISPRM)

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**MARTIN RAKUSA**

**SLOVENIA**

Asst. Prof. Martin Rakusa is consultant neurologist, at the Department of Neurology, University Medical Centre Maribor, Slovenia. He is interested in higher cortical functions. At his work, he mostly treats patients with different types of dementia. Recently, he started a study on impact of mild traumatic brain injury on cognitive functions. He is also co-chair of the Scientific Panel of Neurotraumatology at the European Academy of Neurology.
NICOLE VON STEINBÜCHEL  
GERMANY

Since 2004/2005 Director of the Department of Medical Psychology and Medical Sociology, University Medical Center, Georg-August-University of Göttingen

2001-2004 Associate Professor (C4) of Gerontopsychology at Geneva University and Head of the Neurogerontopsychology Unit, Department of Psychogeriatrics, Geneva University Hospital

1999-2000 C3-Research Professor of the Dorothea-Erxleben Foundation, Magdeburg University

1993-1997 C3-Professor of Medical Psychology, Institute of Medical Psychology (IMP), Munich University (LMU)

1997 Postdoctoral thesis (“Habilitation”) in „Clinical Psychology and Neuropsychology“, Leopold-Franzens University, Innsbruck

1987-1993 Graduation (Dr. rer. biol. hum.) and scientific researcher at the IMP, LMU

1985 Diploma in psychology at the Institute of Psychology, Munich University, studies in philosophy and history of art

Main areas of work (Selection)
Neuropsychology (aging, dementia, stroke, TBI), cognition, (intercultural) health-related quality of life research, currently outcome work package leader of the CENTER-TBI-Study of 5000 patients after traumatic brain injury (TBI) at four time points in two years.

Offices (Selection)
1998-2002 Vice-Chair of the German Society of Medical Psychology
2001-2005 Member of the board of the Swiss Society of Psychology
Since 2003 Member of the board, vice-treasurer of the Academia, currently Vice President of the Multidisciplinaria Neurotraumatologica (AMN)
2007-2010 Member of the board of the European Brain and Behaviour Society (Scientific Committee)
2008 Founding member of the International Society for Clinical Neuromusicology
2008-2011 President of the QOLIBRI Society
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 completed the curriculum on biostatistics 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.

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

From 1985 to 1995, he was member of the Ultrahigh Dexamethasone Head Injury Study Group and the leading biometrician of the German GUDHIS trial in Traumatic Brain Injury.

Since 1995 he is Senior Consultant for Biometry & Clinical Research at the Institute for Data Analysis and Study Planning (IDV). He planned and evaluated about 150 randomized clinical studies worldwide and 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).

Statistical peer reviewer for leading medical journals such as Stroke (American Heart Association).

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

Since 2013 Statistical Expert and Elected Member of the World Academy for Multidisciplinary Neurotraumatology (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.

Since 2018 Co-Chair EAN Guideline Task Force Neurorehabilitation.

Since 2018 Head Biometry & Clinical Research at the Institute for Data Analysis and Study Planning (IDV).

Since 2018 Co-Chair EAN Guideline Task Force Neurorehabilitation.

Since 2018 President of the Academy for Multidisciplinary Neurotraumatology (AMN).