

# 21<sup>ST</sup> AMN CONGRESS



**21 - 22 JUNE, 2024  
HILTON VIENNA WATERFRONT  
VIENNA | AUSTRIA**





ACADEMY FOR  
MULTIDISCIPLINARY  
NEUROTRAUMATOLOGY



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### IN ALPHABETICAL ORDER

- Antón Álvarez/ Spain  
Agata Andrzejewska/ Poland  
Mark Bayley/ Canada  
Heinrich Binder/ Austria  
Dana Boering/ Germany  
Panu Boontoterm/ Thailand  
Bassem Boulos Saad/ Egypt  
Felix-Mircea Brehar/ Romania  
Cătălina Crișan/ Romania  
Daniel Csomor/ Austria  
Duong Dai Ha/ Vietnam  
Karin Diserens/ Switzerland  
Hakan Ekmekci/ Turkey  
Dominik Fortner/ Austria  
Thomas Hamp/ Austria  
Günter Herzer/ Austria  
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Johannes Leitgeb/ Austria  
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Pieter E. Vos/ the Netherlands  
Harald K. Widhalm/ Austria  
Andreas Winkler/ Austria  
Vera Wohlgenannt/ Austria

# SCIENTIFIC PROGRAM





# 21<sup>ST</sup> AMN CONGRESS

21 - 22 JUNE, 2024 | VIENNA | AUSTRIA

## DAY 1, FRIDAY, JUNE 21<sup>ST</sup>, 2024

08:00 – 08:30 **REGISTRATION**

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8:30 – 9:15 **TRAINING COURSE 1 – WEBCAST: HOW TO BUILD AND MAKE SUCCESSFUL AN INTRA-INSTITUTIONAL NEUROTRAUMA TEAM**

**MODERATOR:** Christian Matula (Austria)

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How to Overcome Institutional and Interdisciplinary Obstacles  
Agata Andrzejewska (Poland)

Establishing and Managing a Neurotrauma Board:  
Best Practices and Innovations  
Harald K. Widhalm (Austria)

Phramongkutkloa Simulation Center and its Capacity to Support  
(Neuro)trauma Treatment Training  
Tanongson Tienthavorn (Thailand)

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9:15 – 10:20 **PRESIDENTIAL SESSION**

**MODERATORS:** Johannes Vester (Germany),  
Volker Hömberg (Germany)

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The AMN | Vision & Mission  
Dafin Mureșanu (Romania), Johannes Vester (Germany),  
Volker Hömberg (Germany)

Multidisciplinary Neurotrauma Management ...  
Solutions for Long-term Consequences!  
Christian Matula (Austria)

10:20 – 10:40 **AMN Translational Research in Neurotrauma - Modulation of neurotrophic factors in the treatment of TBI**

Antón Álvarez (Spain)

10:40 – 11:00 **COFFEE BREAK**

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11:00 – 12:00 **CONTROVERSIES IN NEUROTRAUMA TREATMENT – 3 ESSENTIAL DEBATES INCLUDING VOTING**

**MODERATOR:** Dana Boering (Germany)

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Pre-hospital treatment – How it should be organized

- Centralized – Thomas Hamp (Austria)
- De-centralized – Bassem Boulos Saad (Egypt)

Acute treatment

- Surgical – Felix-Mircea Brehar (Romania)
- Non-surgical - Ignacio Previgliano (Argentina)

Rehabilitation after TBI – Can you start too early?

- No – Heinrich Binder (Austria)
- Yes – Andreas Winkler (Austria)

12:00 – 12:20 **KEYNOTE LECTURE**  
**THE SPECIFICS OF NEUROREHABILITATION AFTER TBI**

Mark Bayley (Canada)

12:20 – 12:35 **THE TBI INTERVIEW SERIES PART I**

- Interviewer: Andreas Winkler (Austria)
- To be interviewed: Antón Álvarez (Spain)

12:35 – 13:30 **LUNCH BREAK**

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13:30 – 14:35 **SPECIAL LECTURES**

**MODERATOR:** Ignacio Previgliano (Argentina)

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The AMN – fostering clinical research

Silvina Ilut (Romania)

The PRESENT Patient Registry -  
Objectives and Progress Report

Peter Lackner (Austria)

Epilepsy and Traumatic Brain Injury

Nilda Turgut (Turkey)

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14:35 – 15:40 **CURRENT NEUROTRAUMA GUIDELINES**

**MODERATOR:** Martin Rakuša (Slovenia)

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14:40 – 15:00 Guidelines for Mild and Moderate Traumatic Brain Injury

Pieter E. Vos (the Netherlands)

15:00 – 15:20 Severe TBI Guidelines with Special Focus on ICU Care

Günter Herzer (Austria)

15:20 – 15:40 Guidelines in Surgical/Non-surgical Treatment –  
WHEN to Operate and WHEN NOT to Operate?

Martin Rakuša (Slovenia)

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15:40 – 16:45 **PREHOSPITAL CARE – REALISTIC GOALS IN DIFFERENT  
CARE SETTINGS (DISPATCH MODE, TRANSPORTATION,  
RESCUE SYSTEM, ETC.)**

**MODERATOR:** Johannes Leitgeb (Austria)

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- Prehospital care - Realistic Goals in TBI Patients  
– Bassem Boulos Saad (Egypt)
- How high can we fly? – Eun Sung Park (South Korea)
- What is the Evidence? – Klaus U. Klein (Austria)

16:45 – 17:00 **COFFEE BREAK**

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17:00 – 18:00 **ASPECTS OF HOSPITAL CARE**

**MODERATOR:** Helmut Trimmel (Austria)

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Trauma Room Management for Head Trauma:  
An Integrated Approach to Hospital Care  
Johannes Leitgeb (Austria)

Surgical Management of Common Traumatic Brain  
Injury Lesions  
Lynne Lourdes Lucena (the Philippines)

Special Aspects of ICU Care in sTBI: Is There a Place for  
Neuroprotective Drugs?  
Helmut Trimmel (Austria)

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18:00 – 19:00 **COMPLICATIONS AFTER NEUROTRAUMA IN  
THE ACUTE STAGE**

**MODERATOR:** Eun-Sung Park (South Korea)

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Management of Delirium in Patients with Traumatic Brain Injury  
Cătălina Crișan (Romania)

Surgical Treatment Methods for Acute and Chronic Post-traumatic  
Hydrocephalus and Response to Infection  
Eun-Sun Park (South Korea)

Seizures After Traumatic Brain Injury (TBI):  
A Neurosurgical Perspective  
Gilraed Mota García (Mexico)

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19:00 - 19:45 **CLINICAL INTERACTIVE CASE DISCUSSIONS WITH PRE-  
PREPARED QUESTIONS (PREHOSPITAL CARE & HOSPITAL  
CARE) & "VOTING" BY AUDIENCE RESPONSE SYSTEM (ARS)**  
**MODERATOR:** Pieter E. Vos (the Netherlands)

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Severe Traumatic Brain Injury: How to Make a Right Decision in  
Different Circumstances?  
Duong Dai Ha (Vietnam)

Clinical outcomes and safety of inhaled sevoflurane via the  
anesthetic conserving device for burst suppression in severe traumatic  
brain injury undergoing decompressive craniectomy in neurosurgical  
intensive care units  
Panu Boontoterm (Thailand)

The Role and Capabilities of Cisternotomy in Patients with Severe  
Traumatic Brain Injury  
Makhkamjon Makhkamov (Uzbekistan)

19:45 **END OF DAY 1**

**SOCIAL EVENT IN THE EXHIBITION AREA**

## **DAY 2, SATURDAY JUNE 22<sup>ND</sup>, 2024**

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8:00 – 8:45 **TRAINING COURSE 2 – WEBCAST: NEUROCOGNITIVE  
ASSESSMENTS AFTER TBI FOR NON-NEUROPSYCHOLOGISTS**  
**MODERATORS:** Nicole von Steinbüchel (Germany),  
Katrin Rauen (Germany, Switzerland)

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08:45 – 10:15 **SPECIAL ASPECTS IN HIGH-END HOSPITAL CARE  
OF TBI TREATMENT**  
**MODERATORS:** Felix-Mircea Brehar (Romania)

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08:45 – 09:05 **Advances in Diagnostic Features in TBI**  
Ammar Mallouhi (Austria)

09:05 – 09:25 **Treatment Considerations in Polytrauma Patients: Special Aspects of High-End Hospital Care for TBI**  
Johannes Leitgeb (Austria)

09:25 – 09:45 **Updates in the management of Intracranial Pressure and Multimodal Neuromonitoring**  
Arthur Hosmann (Austria)

09:45 – 10:05 **Movement Disorders after TBI**  
Hakan Ekmekci (Turkey)

10:05 – 10:15 **Artificial Intelligence and its Applications in Neurology and Neurotrauma**  
Dimitar Maslarov (Bulgaria)

10:15 – 10:30 **THE TBI INTERVIEW SERIES PART II – POST-TRAUMATIC COGNITIVE IMPAIRMENT AND PSYCHIATRIC DEFICITS**

- Interviewer: Bassem Boulos Saad (Egypt)
- To be interviewed: Cătălina Crișan (Romania)

10:30 – 10:45 **COFFEE BREAK**

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10:45 – 11:45 **NEUROPSYCHOLOGICAL ASPECTS OF POST-ACUTE REHABILITATION PHASE**  
**MODERATOR:** Volker Hömberg (Germany)

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**Attention Disorders**  
Katrin Rauen (Germany, Switzerland)

Anxiety and Depression after Severe TBI

Karin Diserens (Switzerland)

Aspects of Early Neurorehabilitation after Severe TBI

Vera Wohlgenannt (Austria)

Neuropsychological and Patient-reported Outcome after TBI

Nicole von Steinbüchel (Germany)

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11:45 – 12:30 **PANEL DISCUSSION – THE INFLUENCE OF HEALTH - ECONOMICS DATA ON MEDICAL AND POLITICAL DECISION-MAKING PROCESS – THE IMPORTANCE OF ELEVATING NEUROTRAUMA INTO THE PUBLIC DISCUSSION**

**MODERATORS:** Dafin Mureşanu (Romania),  
Ştefan Strilciuc (Romania)

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**Panelists** – Peter Lackner (Austria); Volker Hömberg (Germany)  
Mark Bayley (Canada); Lynne Lourdes Lucena (The Philippines);  
Felix-Mircea Brehar (Romania); Dominik Fortner (Austria)

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12:30 – 13:20 **CLINICAL INTERACTIVE CASE DISCUSSIONS WITH PRE-PREPARED QUESTIONS & VOTING**

**MODERATOR:** Vera Wohlgenannt (Austria)

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Young man admitted to rehab with ‘unclear movement disorder’  
Dana Boering (Germany)

A case with Campylobacter showing well recovery after Deep Brain Stimulation: Traumatic brain injuries caused by fall attacks following the Covid-19 infection

Hakan Ekmekci (Turkey)

Risk factors for traumatic intracranial bleeding

Jure Preložnik (Slovenia)

13:30 – 14:20 **LUNCH & MEET THE EXPERT – QUESTIONS AND ANSWERS YOU'RE WAITING FOR!**

- What to consider in clinical research in LMIC – Johannes Vester (Germany)
- What are the do's and don'ts in trauma surgery – Christian Matula (Austria)
- What are the essentials in pre-hospital care if I don't have a helicopter – Daniel Csomor (Austria)
- How to do effective acute rehab without (enough) qualified personnel – Vera Wohlgenannt (Austria)
- What assessments should be done routinely after neurotrauma – Nicole von Steinbüchel (Germany)

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14:20 – 15:05 **VISION & PERSPECTIVES ON THE FUTURE OF NEUROTRAUMA CARE**

**MODERATORS:** Volker Hömberg (Germany),  
Johannes Vester (Germany)

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**SPEAKERS:**

- Daniel Csomor (Austria)
- Felix-Mircea Brehar (Romania)

15:05 **CLOSING AND PICTURES**

15:15 **FAREWELL**



# ABSTRACTS



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## MODULATION OF NEUROTROPHIC FACTORS IN THE MANAGEMENT OF TBI

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**ANTÓN ÁLVAREZ<sup>1,2</sup>, IRENE ALVAREZ<sup>1</sup>, JESUS FIGUEROA<sup>1,3</sup>**

1. Medinova Institute of Neurosciences, Clínica RehaSalud, A Coruña, Spain

2. Clinical Research Department, QPS Holdings, A Coruña, Spain

3. Rehabilitation Department, University Hospital, Santiago de Compostela, Spain

Traumatic brain injury (TBI) is the cause of long-term disability in more than 1% of the population worldwide and has no effective drug therapy. TBI causes persistent difficulties in cognition and executive functions in 5-15% of mild cases and in more than half of moderate-severe cases, and enhances the risk of dementia.

Neurotrophic factors (NTFs) have been involved in the pathophysiology of neurodegenerative disorders such as dementia, stroke and TBI, as well as in the recovery of brain damage and cognitive deficits, and might be of therapeutic utility for neural repair and regeneration in TBI. Studying the interactions of different NTFs and their signaling network, rather than addressing a single NTF, should provide a more complete view on the pathological and therapeutic effects of NTFs in prevalent brain pathologies including TBI.

In a recent paper we reviewed the interactions of five NTFs, nerve growth factor (NGF), insulin-like growth factor (IGF-1), brain derived NTF (BDNF), vascular endothelial growth factor (VEGF) and tumor necrosis factor (TNF- $\alpha$ ) and their relevance for brain pathology and therapy in dementia, stroke and TBI, as well as the influence of the neuropeptide preparation Cerebrolysin on these NTFs. The effects of the interactions of these NTFs and Cerebrolysin on Neuroplasticity, neurogenesis, angiogenesis and neuroinflammation, and their contribution to the treatment of TBI and other brain disorders.

Modulation of the expression and interactions of BDNF, NGF, IGF-1, VEGF and TNF- $\alpha$  have been shown to contribute to improving TBI outcome. Cerebrolysin demonstrated the capacity to modulate these NTFs, acting as a multi-target drug with a pleiotropic mechanism of action on neurogenesis, angiogenesis, neuroplasticity and neuroinflammation. Multimodal drugs regulating several alterations in NTFs simultaneously are expected to have a stronger therapeutic impact than single-target drugs in the management of TBI in daily practice.

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## HOW TO OVERCOME INSTITUTIONAL AND INTERDISCIPLINARY OBSTACLES

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### AGATA ANDRZEJEWSKA

Chief of anesthesiology department, Clinical Hospital in Szczecin, Poland

Building and making successful an intra-institutional neurotrauma team can be a challenging but rewarding endeavor.

First of all, what we have to do is to find people who are interested and passionate about neurotrauma care. This may include neurosurgeons, neurologists, emergency department doctors, nurses, rehabilitation specialists, and researchers. Next, it is important to have clear goals and objectives within the neurotrauma team. This could include improving patient outcomes, enhancing research efforts, or advancing education and training in neurotrauma care.

When it comes to taking care of TBI and neurotrauma patients we must remember it is a multidisciplinary effort and we have to encourage collaboration and communication among team members to ensure comprehensive care for neurotrauma patients.

So, have a leader but remember there is a team and you have to value every member the same. You need to establish a clear team structure with defined roles and responsibilities for each team member. Next person you want to convince is the most stubborn one. If you get them on board you will get all the rest.

Next, you have to identify and address institutional barriers. Show how you can improve patient care and at the same time be cost effective. Seek funding, resources and administrative support. Show that this is a shared goal towards improved patient centred care.

And last but not least communication is a key to success. Feedback is a huge part of collaboration and improvement.

If you want to know how you perform it is also important to evaluate the outcomes and collect data. It helps you not only to improve but to get everybody on board and show them that what you do makes sense and also where you, as a team, can improve. At the beginning it is difficult. But once you start and follow these steps you can build and make successful an intra-institutional neurotrauma team that delivers high-quality care to patients. There are going to be some drawbacks, failures, and difficulties but it is important not to get discouraged and be persistent focusing on the big picture.

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## **EARLY NEUROREHABILITATION! DO WE KNOW WHAT WE ARE TALKING ABOUT?**

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### **HEINRICH BINDER**

Landsteiner Institute for Neurorehabilitation and Space Medicine Vienna, Austria

Early neurorehabilitation is a buzzword and is also used as such. It was intended to reflect a certain fact in an abbreviated form. Unfortunately, it is all too often used without reflection. By this I mean a practicable definition, which I also place in relation to the nature of rehabilitation in relation to time.

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## **YOUNG MAN ADMITTED TO REHAB WITH 'UNCLEAR MOVEMENT DISORDER'**

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### **DANA BOERING**

Secretary General of the European Federation for Neurorehabilitation Societies

The presentation will debate the case of a 26 years-old patient with progressive head tremor, action and kinetic tremor of both extremities, gait ataxia, fatigue, concentration deficits, and occasional diplopia.

Four years before he had a severe TBI falling from a 4 meter-high scaffold which hit him on the right mastoid, initially followed by right-sided deafness, slight left-sided action tremor and transient gait disorder, which remitted within 4-5 months, then, 2 years later, slowly manifesting progressively again with further increase despite diverse tentatives of pharmacological approaches.

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## **CLINICAL OUTCOMES AND SAFETY OF INHALED SEVOFLURANE VIA THE ANESTHETIC CONSERVING DEVICE FOR BURST SUPPRESSION IN SEVERE TRAUMATIC BRAIN INJURY UNDERGOING DECOMPRESSIVE CRANIECTOMY IN NEUROSURGICAL INTENSIVE CARE UNITS.**

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### **PANU BOONTOTERM**

Division of Neurological surgery unit, Department of Surgery and Division of Critical Care Medicine, Department of Medicine, Phramongkutklao Hospital, Bangkok, Thailand

Previous studies indicate that inhaled sevoflurane via the anesthetic conserving device could be useful for the sedation of patients in the intensive care unit (ICU), but prospective

studies evaluating inhaled sevoflurane via the anesthetic conserving device efficacy have been small. The aim of this study was to test whether burst suppression with inhaled sevoflurane via the anesthetic conserving device in patients with severe traumatic brain injury undergoing decompressive craniectomy in clinical outcomes and safety.

**Objectives:** To evaluate the efficacy and safety of inhaled sevoflurane via the anesthetic conserving device.

**Methods:** This case report evaluated the efficacy and safety of up to 120 hours of inhaled sevoflurane via the anesthetic conserving device in severe traumatic brain injury with post-operative intractable cerebral edema undergoing decompressive craniectomy and status epilepticus. Patient was assigned to sevoflurane inhalation via the Sedaconda anesthetic conserving device (ACD; Sedana Medical AB, Danderyd, Sweden; ACD-L) combination with intravenous propofol infusion (20 mg/mL), midazolam 5 mg/hr and neuromuscular blocking agent (cis-atracurium) 10 mg/hr for 120 hour and decreased dose propofol infusion and adjust vasopressor to keep mean arterial pressure more than 65 mmHg. The primary endpoint was percentage of time in Bispectral index (BIS) range 0 to 10 at least 72 hour sedation, RASS measurements range -1 to -4, and no major protocol violations. Key secondary endpoints were opioid requirements, spontaneous breathing, time to control status epilepticus, time to wake-up and extubation, and adverse events. Safety was assessed in all patients who received at least one dose.

**Results:** A 42-year-old man is involved in a motor vehicle collision. He was an unrestrained driver; according to emergency scene personnel, He was ejected from the vehicle. Upon arrival at the emergency department, his initial conditions was Unconsciousness, no voice, unequal breath sound, no subcutaneous emphysema, no cyanosis, trachea shift to the left and E1VtM4 pupil Rt. 4 mm Lt. 3 mm SRTLBE. Patient was complete institutional concept of trauma care in term of resuscitation, protect and secure airway, ventilation and oxygenation, stop the bleeding, shock therapy and prevent from hypothermia. After operation at ICU this patient was GCS deterioration to E1VtM3 pupil Rt. 4 mm Lt. 3 mm SRTLBE. CT Brain non-contrast was done and neurosurgeon had a plan to perform re-open for clot remove and ICP monitoring. During Intra-operative found intractable cerebral edema and hypotension. His clinical progressed to perioperative intractable cerebral edema and status epilepticus. 20% mannitol administration and decompressive craniectomy was done, owing to uncontrolled intraoperative brain swelling, neurosurgeon decided to terminate operation and could not perform ICP monitoring. Patient was admitted in the ICU after procedure for post-operative care and intracranial hypertension management. Post-operative he developed status epilepticus. Intracranial hypertension management with 30 degree head elevation, Intravenous fentanyl, 2% propofol, Cis-atracurium and Midazolam. After increased dosage of propofol and midazolam, this patient was hypotension. Norepinephrine was increased titration to maintain mean arterial pressure more than 65 mmHg. Post-

operative status epilepticus could not control. Hypotension was continued to reduce in blood pressure. Norepinephrine was increased titration to nearly max dose. SOFA score was increased. Acute kidney injury and transaminitis was found. We decided to perform burst suppression. How did the methods that we should do for start burst suppression? Inhaled sevoflurane via the anesthetic conserving device with propofol-based total intravenous anesthesia on the burst suppressive effect measured with the BIS monitor. The endpoint were Bispectral index (BIS) range 0 to 10, Time to control status epilepticus, Opioid requirements, Adequate sedation, Spontaneous breathing, Time to wake-up and extubation and Adverse events. Patient was assigned to inhaled sevoflurane via the anesthetic conserving device completed the 120 hour follow-up. With inhaled sevoflurane via the anesthetic conserving device burst suppression, opioid dose intensity was 30% lower than before apply the device for the overall burst suppression period and spontaneous breathing was more frequent after disconnect the device 1 hour on day 6. Times to improve of Glasgow coma scale and resolved from status epilepticus were short and median wake-up was faster after disconnect the device on day 8. No common adverse events such as prolong hypotension, delirium, oliguria and atrial fibrillation.

**Conclusions:** Lower opioid dose intensity than before apply the device, frequently spontaneous breathing after disconnect, short times to improve of Glasgow coma scale and resolved from status epilepticus, faster wake-up and no common adverse events were support the use of inhaled sevoflurane via the anesthetic conserving device in this patients who have clinical need for burst suppression.

#### References:

1. Purrucker JC, Renzland J, Uhlmann L, Bruckner T, Hacke W, Steiner T, et al. Volatile sedation with sevoflurane in intensive care patients with acute stroke or subarachnoid haemorrhage using AnaConDa®: An observational study. *Br J Anaesth* 2015;114:934-43.
2. Misra S, Koshy T. A review of the practice of sedation with inhalational anaesthetics in the intensive care unit with the AnaConDa® device. *Indian J Anaesth* 2012;56:518-23.
3. Bösel J, Purrucker JC, Nowak F, Renzland J, Schiller P, Pérez EB, et al. Volatile isoflurane sedation in cerebrovascular intensive care patients using AnaConDa®: Effects on cerebral oxygenation, circulation, and pressure. *Intensive Care Med* 2012;38:1955-64.

**Grant Acknowledgement:** We would like to thank the staff of the neurosurgical Intensive Care Unit, Phramongkutklo Hospital for their assistance and resources in running the study

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## DECENTRALIZED PRE-HOSPITAL TREATMENT

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### **BASSEM BOULOS SAAD**

Prof. of Anaesthesia and Intensive care, Ain Shams University, Cairo, Egypt

Traumatic brain injury (TBI) is a physical insult to the brain that results in temporary or permanent impairment of normal brain function. TBI describes a heterogeneous group

of disorders. The resulting secondary injury, namely brain swelling and its sequelae, is the reason why patients with these vastly different initial insults are homogeneously treated. Much of the evidence for the management of TBI is poor or conflicting, and have many controversies and thus definitive guidelines are largely unavailable for clinicians at this time. A substantial portion of this article focuses on discussing the controversies in the management of TBI.

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## **PREHOSPITAL CARE - REALISTIC GOALS IN TBI PATIENTS**

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### **BASSEM BOULOS SAAD**

Prof. of Anaesthesia and Intensive care, Ain Shams University, Cairo, Egypt

Traumatic brain injury (TBI) is an important cause of death and disability, particularly in younger populations. The prehospital evaluation and management of TBI is a vital link between insult and outcome and can have dramatic implications for subsequent morbidity and mortality. Following a TBI the brain is at high risk for further ischemic injury, with prehospital interventions targeted at reducing this secondary injury so optimizing cerebral physiology. In the following presentation we discuss the prehospital care - Realistic Goals in Different Care Settings (Dispatch mode, Transportation, Rescue System). We evaluate patient management strategies including indications for advanced airway management, oxygenation, ventilation, fluid resuscitation, and transport decisions including the role of triage models and trauma centers.

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## **ACUTE SURGICAL TREATMENT IN TRAUMATIC BRAIN INJURY**

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### **FELIX-MIRCEA BREHAR<sup>1,2</sup>, ALEXANDRA MIHAELA PĂTRĂȘCAN<sup>1,2</sup>**

1. 1<sup>st</sup> Neurosurgical Department, Bagdasar-Arseni Clinical Emergency Hospital, Bucharest, Romania

2. Neurosurgery Department, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

Traumatic brain injury (TBI) is described as an alteration in the brain function caused either by an external blunt force or by penetrative means and is the leading cause of neurological mortality and disability in trauma patients. The intricacy of this medical issue requires multimodal monitoring. Concerning epidemiology, the highest incidences of TBIs were recorded in pediatric patients until the age of 4 years, and in adult patients aged 65 years and older. Nevertheless, regardless of age group, patients with low-energy falls have lower chances of requiring acute surgical interventions. Conversely, patients with high-energy TBIs are 50% more likely to receive emergency surgeries.

Notwithstanding the purpose of TBI management to prevent secondary insult, the main focus of acute surgical treatment in TBI is to prevent further neurological damage and reversal of symptoms mostly by evacuating intracranial hemorrhages and/or decompressive craniectomy.

It is worth noting that although recent international guidelines recommend a specific therapeutic approach, surgical therapeutic strategies must be taken in context and adjusted to each individual, based on various factors such as the type and grade of TBI, comorbidities, neurological status, the size/volume/localization of mass lesions, and intracranial pressure measurements.

Although concerted efforts to tackle this traumatic pathology issue have been made in the last decades, it is still considered that a large number of TBIs are unreported. However, given the medical awareness and significant advancement regarding the matter, better therapeutic management that is currently available has led to a decrease in mortality from TBI.

Keywords: traumatic brain injury, neurosurgery, neurotrauma, acute surgical treatment

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## **THE PROMISING APPLICATIONS OF 3D PRINTING TECHNOLOGY IN NEUROTRAUMA**

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Severe traumatic brain injuries (TBI) represent a major health problem with significant social implications and substantial economic burden. Many severe TBIs, especially open TBIs, are also associated with complex skull fractures. These severe cases are operated in emergency and require radical neurosurgical approach including eschilectomy with removal of bone fragments, resulting in large and complex skull bone defects. 3D printing technique is a newly developed and promising technology which can assist neurosurgeons in treating these large and complex skull bone defects. The authors review the application of 3D printing technology in neurotrauma and present several cases of severe TBI associated with complex skull fracture, that were successfully managed using this technique. Moreover, the future perspective of 3D technology in neurotrauma is discussed in detail. In addition, this paper contextualizes



the impact of other novel tools, such as virtual reality and artificial intelligence, as these revolutionary technologies could play an important role in managing complex trauma cases.

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## **MANAGEMENT OF DELIRIUM IN PATIENTS WITH TRAUMATIC BRAIN INJURY**

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### **CĂTĂLINA CRIȘAN**

Department of Neurosciences, Discipline of Psychiatry and Pediatric Psychiatry,  
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According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders, Text Revision (DSM-5-TR), delirium is characterized by a significant disturbance in attention, which involves a reduced ability to direct, focus, sustain, and shift attention, accompanied by a diminished awareness of one's environment. This condition develops rapidly, typically within hours to a few days, and represents a notable change from the individual's usual state of attention and awareness. The severity of these symptoms can vary throughout the day. In addition to these attentional disturbances, delirium is marked by further cognitive impairments, including memory deficits, disorientation, language difficulties, issues with visuospatial abilities, or perceptual disturbances. Up to 50% of patients with traumatic brain injury (TBI) develop delirium during their hospital stay. This incidence rises to 75% among patients over 50 years old with severe TBI. Delirium typically manifests within the first four days post-TBI, although it can occur at any time during hospitalization. It may also develop in patients with minor or moderate TBI, or even in those without traumatic intracranial injuries. The presence of delirium is associated with prolonged hospital stays and an increased mortality rate within six months. Additionally, delirium in the acute phase post-TBI is a predictive factor for subsequent cognitive dysfunction or post-traumatic dementia. Managing delirium in patients with traumatic brain injury presents unique challenges. The complexity arises from the interplay between the cognitive and attentional disturbances characteristic of delirium and the underlying brain injury, which can exacerbate these symptoms and complicate treatment. Ensuring accurate diagnosis and effective intervention requires careful consideration of the various contributing factors and a comprehensive understanding of the patient's overall medical and neurological status.

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## **SEVERE TRAUMATIC BRAIN INJURY: HOW TO MAKE A RIGHT DECISION IN DIFFERENT CIRCUMSTANCES?**

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### ***DUONG DAI HA***

Neurosurgeon at Viet Duc University Hospital and lecturer at Hanoi Medical University, Vietnam

Due to the diverse nuances of traumatic brain injury, clinical decision-making varies case-by-case and the application of the guidelines is quite flexible, especially in Vietnam, a resource-restricted country.

Besides the evidence, we should consider: patient factors, anatomic factors, surgical factors, and clinical settings.

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## **ANXIETY AND DEPRESSION AFTER SEVERE TBI**

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### ***KARIN DISERENS***

Acute Neurorehabilitation Unit, Neurology, Department of and Clinical Neurosciences, University Hospital of Lausanne, Lausanne, Switzerland

Traumatic brain injury (TBI) is associated with a host of psychiatric and neurobehavioral problems. As the mortality rate has declined for severe TBI, attention has turned to the cognitive, affective, and behavioral sequelae of injuries across the severity degrees, which are often more disabling than residual physical effects.

We discuss the relationship between the mechanism, cerebral lesion, and contextual factors of the patient and the anticorrelation in the Default Mode Network and Attention Network as well as the impact of therapeutic approaches for patients with severe TBI awakening after coma and anxiety and depression.

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## **MOVEMENT DISORDERS AFTER TBI**

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### ***HAKAN EKMEKCI***

Selçuk University, Faculty of Medicine, Department of Internal Medical Sciences, Neurology Department, Selçuklu, Turkey

Frequent fall attacks and TBI are common in dystonia and other conditions, especially Parkinson Disease (PD), which is the most important amongst movement disorders. TBI has a very important place in the formation and etiology of these movement disorders.

In particular, how dopaminergic pathways are affected after TBI plays a key role in possible movement disorders.

Especially, REM period Behavioral Disorder (RBD) may have an important mechanism in TBI. Since RBD and TBI are specific risk factors for PD, then there should be focused approaches on these two separate conditions of the brain, i.e., PD and TBI.

Dopaminergic abnormalities are often seen after TBI, but patients usually lack parkinsonian features in the early period. TBI, PD and RBD may have distinct striatal dopamine abnormalities. Using dopamine transporter (DaT) imaging is a good way to clarify the interconnections of dopaminergic effects in TBI.

When dopaminergic pathways were examined with DaT scan, it was observed that different areas were affected in TBI, RBD, and PD. The patterns leading to loss of dopaminergic pathways, particularly in the Putamen and Caudate area, are different in PD and TBI. An important and striking finding is that while similar loss is observed in the caudate nucleus in early-stage PD and intermediate/advanced stage in TBI, the DaT loss in the putamen is greater in intermediate/advanced stage PD patients. Motor findings in Parkinson's do not appear early due to the preserved putaminal dopamine level in TBI. Especially despite TBI, Parkinsonian findings do not occur easily in the early period.

Furthermore, the camptocormic patient, which is very rare in PD, was examined. The course of Camptocormia, that showed clinically significant improvement after Deep Brain Stimulation, is discussed. The patient's characteristics are examined in the light of the TBI situation that developed during the pandemic period. In addition to the supplementary burden caused by Covid infection, the relationship between movement disorders and TBI in general is questioned promptly.

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## **A CASE WITH CAMPTORMIA SHOWING WELL RECOVERY AFTER DEEP BRAIN STIMULATION: TRAUMATIC BRAIN INJURIES CAUSED BY FALL ATTACKS FOLLOWING THE COVID-19 INFECTION**

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**HAKAN EKMEKCI**

Selçuk University, Faculty of Medicine, Department of Internal Medical Sciences, Neurology Department, Selçuklu, Turkey

Camptocormia (Cc) is rarely reported in literature and is also known as “bent spine syndrome”. It was first described by Brodie in 1818. This date is 1 year later than the date that James Parkinson described the disease to be remembered by his name at the present time. Camptocormia is becoming an increasingly recognized finding in patients

with Parkinson's disease and dystonic disorders.

Camptocormia in Parkinson's Disease (PD) is the cardinal example of Movement Disorders defined by marked anteroflexion of the trunk, which abates in the recumbent position, with no or minimal response to levodopa. Camptocormia is becoming an increasingly recognized finding in patients with PD and dystonic disorders.

The case was a 57 years-old woman suffering from back bending and bradikinesia since the age of 41. The woman's camptocormia was unknown and she was mistakenly thought to have lumbar discopathy and was operated on due to herniation. The movement disorder and clinical picture gradually worsened. The patient was operated with bilateral SubThalamic Nuclei - Deep Brain Stimulation (STN-DBS), although this has been done very rarely according to the literature. After this procedure, camptocormia and movement disorder quickly recovered.

She had a severe attack of Covid-19 during the pandemic period. Frequent fall attacks as well as TBI states were developed. Then dysfunction of DBS and L-Dopa unresponsiveness began. She died at the age of 57 due to cognition and sleep disturbances and severe akinesia attacks.

This case is aimed to discuss the relationship between TBI, movement disorders, and camptocormia.

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## CENTRALIZED CARE IN NEUROTRAUMA

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### THOMAS HAMP

Medical University of Vienna, Vienna General Hospital, Austria

Centralized care models in trauma management have shown significant benefits over decentralized systems, particularly in Europe, where diverse healthcare infrastructures and varied access to resources present unique challenges.

Specialized trauma centers and streamlined patient pathways offer a robust framework

for improving clinical outcomes, optimizing resource use, and enhancing the overall quality of trauma care. This model facilitates a multidisciplinary approach to patient care, ensuring that trauma patients receive timely and expert treatment from a coordinated team of specialists. Such an approach is crucial for critical cases, where every second counts.

Centralized care models in Europe have led to reduced mortality rates, shorter hospital stays, and improved long-term recovery for trauma patients. These outcomes are attributed to several key factors inherent in centralized systems, including the concentration of expertise and resources, standardized treatment protocols, and advanced research capabilities.

Furthermore, centralized care improves training and education for medical professionals, fostering a cycle of continuous improvement and innovation in trauma care. By concentrating resources and expertise, centralized care not only enhances patient outcomes but also ensures a more efficient use of medical resources, reducing overall healthcare costs.

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## **SEVERE TBI GUIDELINES WITH SPECIAL FOCUS ON ICU CARE**

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### **GÜNTER HERZER**

Department of Anesthesiology, Emergency and Critical Care Medicine, General Hospital Wiener Neustadt, Vienna,, Austria

Severe traumatic brain injury (sTBI) is a leading cause of death and disability. Treatment of TBI patients aims at preventing secondary brain damage and thus improving diagnosis.

Evidence-based guidelines for treatment of TBI were provided by the Brain Trauma Foundation in the fourth edition in 2016.

The guidelines address treatment interventions, monitoring, and treatment thresholds that are particular to TBI. Based on the evaluation of the evidence, i.e. the assessment of quality and applicability of individual studies, the BTF developed recommendations for 18 topics of TBI care.

But there remained a lack of guidance in areas of TBI management where the evidence was insufficient and deficient of a treatment protocol.

This void was closed by the Seattle International Severe Traumatic Brain Injury Consensus Conference (SIBICC), which presented consensus-based algorithms for

ICP-monitor-based adult sTBI management in 2019. The consensus working group developed 18 interventions as fundamental to TBI care and ten treatments not to be used. A three-tier algorithm focused on treating elevated ICP was established.

In 2020 the same group published a sTBI protocol for adult patients with both intracranial pressure and brain oxygen monitors in place.

The World Society of Emergency Surgery (WSES) presented consensus conference guidelines on monitoring and management of severe adult traumatic brain injury patients with polytrauma in the first 24 hours in 2019.

In 2017 guidelines for the management of severe traumatic brain injury in the first 24 hours had been published by the French Society of Anaesthesia, Intensive Care Medicine.

The presentation on the 21<sup>st</sup> Congress of the Academy for Multidisciplinary Neurotraumatology gives an overview of the most important guidelines of sTBI care.

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## **UPDATES IN THE MANAGEMENT OF INTRACRANIAL PRESSURE AND MULTIMODAL NEUROMONITORING**

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**ARTHUR HOSMANN**

Department of Neurosurgery, Medical University of Vienna, Vienna, Austria

Effective management of intracranial pressure (ICP) involves a multifaceted approach, including medical therapies, surgical interventions, and invasive and non-invasive monitoring techniques. Treatment strategies are focused on optimizing cerebral perfusion pressure while minimizing secondary brain injury. This talk aims to provide an overview of recent advancements in the management of ICP and the utilization of multimodal neuromonitoring techniques.

Multimodal neuromonitoring is a comprehensive approach that integrates various monitoring modalities, including ICP monitoring, brain tissue oxygen tension measurement, cerebral blood flow assessment, and measurement of cerebral metabolism. Each modality offers distinctive insights into pathophysiological processes, extending beyond mere ICP monitoring, thereby collectively presenting a nuanced and comprehensive understanding of brain physiology.

This approach guides targeted therapy by facilitating the early detection of secondary ischemic events, thereby providing clinicians with a crucial time window to promptly

initiate therapeutic interventions and make informed decisions regarding patient care. Innovations in neuromonitoring technologies have revolutionized patient care by enabling real-time data acquisition and analysis. This capability empowers clinicians to customize treatment strategies based on individual patient responses, facilitating proactive management and potentially leading to improved patient outcomes. Additionally, it allows for the detection of novel prognostic markers, further enhancing the precision and efficacy of treatment plans.

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## **THE ACADEMY FOR MULTIDISCIPLINARY NEUROTRAUMATOLOGY - FOSTERING CLINICAL RESEARCH**

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### ***SILVINA ILUT***

Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania  
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Romania

Traumatic brain injury (TBI) is a real-world public health problem. In the United States, there are 69,000 deaths TBI-related per year and in the European Union, there are approximately 1.5 million TBI-related hospital admissions and 57,000 TBI-related deaths yearly. It requires holistic attention from various specialists such as neurologists, neurosurgeons, orthopedists, and physical therapists. In 2017, The Lancet Neurology Commission on TBI called for a concerted effort to tackle the global health problem posed by TBI. Since then, multiple trials have been run in both high and low-income countries. Due to these trials, various causes of TBI were detected. In low-income countries, the main causes of TBI are road traffic injuries, usually involving motorcyclists and pedestrians. To try to reduce the incidents, highlight the problem, and find new solutions, the World Health Organization launched in 2021 the Road Safety Program, which is focused on reducing road traffic injuries, including TBIs. Regarding high-income countries, most TBIs are caused by falls mostly in elderly people. However, no specific informative programs for the elderly are yet available, leaving the place for improvement in future trials.

Due to its complexity and the long-term cognitive, physical, and psychological health of patients, while also having a major impact on family and caregivers, current research focused on various items such as rehabilitation, biomarkers, treatment options, and psychological support.

In contrast with what was thought earlier in this pathology, recent studies show that exercise can favor the functional status outcome post-TBI. Moreover, it has been observed that if special types of rehabilitation are performed in direct relation to the

patient's symptoms, the outcome can be favorable. With the rapid progress made in the artificial intelligence field, telemedicine, and mobile applications, access to doctors, remote follow-up and recovery programs can be easily facilitated. Also, the engineers are trying to develop different devices that can improve the quality of life of patients, including post-TBI. Machine learning algorithms were also used in predicting the outcomes of TBI treatment by evaluating demographic features, laboratory data, imaging indices, and clinical features. However, there might be a discrepancy in the access to these technologies between low vs high-income countries.

Regarding pharmacological treatment, several trials for developing new drugs are in progress. Some retrospective data show better outcomes for patients with severe TBI endotracheal intubation realized in pre-hospital. Also, the administration of various treatments in pre-hospital settings was lately evaluated, with tranexamic acid being the most widely studied drug. After brain injury, the brain and other organs trigger a series of metabolic changes, and can respond well to administration of Cerebrolysin, which was associated with a statistically significant change in GCS and GOS. Other therapy includes creatine supplementation which shows superior efficacy as a neuroprotective agent in battling oxidative stress and cognitive function. TREM2 is also promising to serve as a neuroprotective factor and to improve long-term memory recovery after brain injury by modulating the microglial cell's function. A newly discovered form of regulated cell death is ferroptosis, triggered primarily by lipid peroxidation; there's growing evidence that ferroptosis inhibitors may ameliorate induced cognitive deficits in trauma patients, blocking the hippocampal ferroptosis and neuroinflammation.

Since the clinical evolution and prognosis of TBI patients can be difficult to predict, many efforts of scientists focused on finding various biomarkers that could help clinicians in these dilemmas. Several biomarkers such as microARN, exosome, S100B, GFAP, NF protein, and Tau protein have been tested as potential diagnosis and prognosis biomarkers. Even though the results are promising, there is yet no biomarker that has been included in clinical practice as having specific value in patients with TBI. More studies on this topic are ongoing and probably soon a biomarker panel will be available in current practice.

In conclusion, enormous progress has been made in the TBI field in the last few years, however, there are still a lot of unknown variables that are currently under evaluation. Due to its holistic implications, multiple large clinical trials are needed in various fields such as rehabilitation, pharmacological treatment, and diagnosis and prognosis biomarkers.

The Academy for Multidisciplinary Neurotraumatology (AMN) supports clinical research through innovative treatments and monitoring patient outcomes, as the basis



for further developing strategies aimed at improving the life of patients affected by neurotrauma. Through its multidisciplinary vision, the AMN directs its efforts towards improving research, alongside education and medical practice, to enhance the quality of life for patients worldwide.

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## **WHAT IS THE EVIDENCE?**

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### ***KLAUS U. KLEIN***

Associate Professor of Anesthesiology and Critical Care Medicine, Medical University of Vienna, Vienna, Austria

This presentation emphasizes the critical role of prehospital care in neurotrauma. Substantial evidence underscores the significant enhancement of patient outcomes through prompt and advanced prehospital trauma interventions. Vital components encompass rapid assessment, airway and cardiovascular management, hemorrhage control, fracture immobilization, prevention of further brain injury, and expedient transportation to a primary trauma center. The implementation of standardized protocols and specialized equipment, such as tourniquets, video-laryngoscopy, and portable ultrasound has markedly contributed to improved outcomes. Clinical data robustly supports the indispensable role of prehospital trauma care in saving lives and mitigating injury severity through timely interventions at the scene.

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## **THE PRESENT PATIENT REGISTRY - OBJECTIVES AND PROGRESS REPORT**

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### ***PETER LACKNER***

Head of the Department of Neurology, Klinik Floridsdorf, Vienna, Austria

PRESENT is an international traumatic brain injury (TBI) registry developed by the Academy of Multidisciplinary Neurotraumatology (AMN). The project aims to address the information gap between countries and facilitate multidimensional approaches for TBI care. The main purpose of this instrument is to integrate the collection of clinical, injury prevention, and quality of care components associated with TBI. This comprehensive approach aims to provide valuable information for enhancing healthcare delivery and gaining a deeper understanding of brain injury as a whole at 5 different levels: Critical Care/Anesthesiology, Neurosurgery, Neurology, Acute Rehab, Subacute rehab, using a transversal approach that follows the patient pathway from pre-hospital to post-hospital care.

The mission is to provide easy, universal access for institutions that have previously been deprived of this exercise, ultimately leading to an enhanced environment for dissemination of treatment guidelines, patient pathways, and neuro-rehabilitation best practice. Proposed Regional Multidisciplinary Teams based on their specialty clusters are currently developing this registry in a multidisciplinary Delphi process. The process will be described and the status of the project will be presented.

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## **TRAUMA ROOM MANAGEMENT FOR HEAD TRAUMA: AN INTEGRATED APPROACH TO HOSPITAL CARE**

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***JOHANNES LEITGBER***

Department of Trauma Surgery, Medical University of Vienna, General Hospital of Vienna, Austria

The effective management of head trauma within the critical confines of a trauma room requires a multifaceted approach that includes rapid assessment, immediate intervention, and interdisciplinary collaboration. This presentation will address the protocols and practices that define exemplary trauma room management from a hospital care perspective.

In the trauma room, the golden hour of trauma care requires rapid diagnostic precision and treatment delivery. Advanced imaging technologies as well as continuous monitoring systems allow physicians to quickly identify intracranial injuries and initiate appropriate interventions. The role of a coordinated trauma team, specifically comprised of emergency physicians, trauma surgeons, neurosurgeons, anesthesiologists, and nursing staff, is critical to ensure a seamless transition of care from the trauma room to the operating room or intensive care unit.

Key aspects of trauma room management include the implementation of standardized trauma protocols, the use of algorithm-driven decision-making tools, and the importance of clear and concise communication within the healthcare team. In addition, patient stabilization techniques such as airway management, bleeding control, and intracranial pressure monitoring are important components of the initial care phase.

By fostering an environment of continuous improvement and multidisciplinary collaboration, hospitals can significantly improve the prognosis and recovery trajectories of patients with severe head injuries.

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## **TREATMENT CONSIDERATIONS IN POLYTRAUMA PATIENTS: SPECIAL ASPECTS OF HIGH-END HOSPITAL CARE FOR TBI**

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### ***JOHANNES LEITGB***

Department of Trauma Surgery, Medical University of Vienna, General Hospital of Vienna, Austria

Treating polytrauma patients with traumatic brain injury (TBI) presents unique challenges that require specialized, high-quality hospital care.

In polytrauma cases, the interplay between systemic injuries and TBI requires a holistic and multidisciplinary approach. High-end hospitals are equipped with state-of-the-art technologies and specialized teams that can provide comprehensive care. Key considerations include prioritizing life-saving interventions, such as securing the airway, controlling bleeding, and ensuring adequate cerebral perfusion.

Advanced imaging techniques are essential for accurately assessing the extent of brain injury and concurrent systemic trauma. Neurointensive care units play a critical role in monitoring intracranial pressure, cerebral oxygenation, and hemodynamic stability, using tools such as intracranial pressure monitors and bulb oximetry.

Interdisciplinary collaboration between trauma surgeons, neurosurgeons, critical care physicians, and rehabilitation specialists is critical to developing individualized treatment plans. The integration of early rehabilitation services also contributes to improved long-term outcomes by addressing the diverse needs of polytrauma patients.

Evidence-based practices are highlighted and demonstrate how world-class hospital care can significantly improve recovery trajectories and quality of life for patients with polytrauma and TBI. By focusing on the unique aspects of treatment in advanced medical facilities, insights into achieving optimal outcomes in this challenging clinical setting are given.

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## **SURGICAL MANAGEMENT OF COMMON TRAUMATIC BRAIN INJURY LESIONS**

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### ***LYNNE LOURDES LUCENA***

University Of Santo Tomas, F. Aquende Dr, Legazpi City, the Philippines

As innovations and improvements in neurosurgical care evolve, the aspects of neurotrauma care have also started to advance. The reported frequency of emergency

neurosurgical intervention in hospitalized traumatic brain injury patients vary from 4-29 percent depending on the research cited.

Discussion will include a general summary on the surgical management of the common traumatic brain injury lesions and also a study about task sharing in emergency neurotrauma surgery as a means to address scarcity of neurosurgeons in the Philippines.

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## **THE ROLE AND CAPABILITIES OF CISTERNOTOMY IN PATIENTS WITH SEVERE TRAUMATIC BRAIN INJURY**

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### **MAHKAMJON MAHKAMOV**

Head of Cerebrovascular Department at Republican Research Center of Emergency Medicine, Tashkent, Uzbekistan

We analyzed the role and capabilities of cisternotomy in patients with severe traumatic brain injury, where it was noted that cisternotomy can improve the survival rates of patients with severe TBI. In order to assess the effect of cisternotomy on the results of treatment, the condition of all patients was distributed according to the Glasgow coma scale, which showed that in 81.2% of cases they were admitted to the clinic with a GCS below 10 points. 70.3% of patients were included with different degrees of dislocation syndrome. Also, a statistically dependent relationship between data regarding changes in the diameter of the optic nerve sheaths and the time of recovery of consciousness is revealed – the smaller the size of the diameter of the optic nerve sheaths, the earlier the restoration of consciousness. To confirm the reliability of CT measurements, we compared ICP measurements using intra-parenchymatous sensors with data of measurement of the diameter of the optic nerve sheath, and revealed a strong positive relationship between these indicators that allowed the completion of a scale of conformity between the diameter of the optic nerve sheath to ICP parameters, allowing non-invasive ICP assessment. In order to predict mortality, we used the Rotterdam scale, the results of which revealed that the predicted mortality in the main group was 78.6%, exceeding the actual mortality rate by 16.3 times, which was also revealed in the control group, but 2 times more, composing 7.8% of the actual fatality rate. The evaluation of the results according to GCS showed improved indicators for all outcome degrees in the main group. There is a two-time prevalence of high 1<sup>st</sup> grade in the control group (9.3% vs. 4.8%).

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## **ADVANCES IN DIAGNOSTIC FEATURES IN TBI**

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### **AMMAR MALLOUHI**

Associate Professor, Department of Neuroradiology, Vienna Medical University, Austria

Neuroimaging has a vital role for the detection and categorization of primary and secondary brain and spinal cord injuries as well as for guiding management of neurotrauma sequelae. CT remains the primary imaging examination for initial triage and follow-up, especially cases that require neurosurgical intervention. MRI is sensitive for the detection of microhemorrhage, blood products and focal edema. A main role of MRI is in cases with severe clinical picture, but without clear CT findings explaining neurologic findings.

The aim of this presentation is to review indications of appropriate imaging modality, to review common traumatic emergency abnormalities of the brain and spinal cord, to identify immediate life-threatening abnormalities and to determine the role of advanced imaging techniques.

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## **ARTIFICIAL INTELLIGENCE AND ITS APPLICATIONS IN NEUROLOGY AND NEUROTRAUMA**

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### **DIMITAR MASLAROV**

Chairman Neurology Clinic, University First MHAT, St. Joan Krastitel, Sofia, Bulgaria  
Medical College Y. Filaretova, Medical University, Sofia, Bulgaria

Artificial intelligence (AI) has emerged as a transformative force in the field of neurology, offering new avenues for understanding, diagnosing, and treating neurological disorders. This presentation provides an overview of the meaning, development, and applications of AI in neurology and neurotrauma. Firstly, the concept of AI and its significance are explored. The evolution of AI technologies, from traditional rule-based systems to modern machine learning and deep learning approaches, is discussed, highlighting key milestones and breakthroughs. We then delve into the diverse applications of AI in neuroscience, including stroke diagnosis, neurotrauma, neuroimaging analysis, predictive modeling of disease progression, personalized treatment planning, and rehabilitation interventions. Additionally, ethical considerations and challenges associated with the integration of AI into clinical practice are addressed, emphasising the importance of responsible implementation and ongoing research efforts. Overall, this presentation aims to provide insight into the transformative potential of AI in advancing neurological and neurotrauma care and fostering innovation in the field.

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## **MULTIDISCIPLINARY NEUROTRAUMA MANAGEMENT ... SOLUTIONS FOR LONG-TERM CONSEQUENCES!**

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**CHRISTIAN MATULA**

Neurosurgical Department, Medical University of Vienna, Austria

Neurotrauma management over the decades has become one of the most important issues in whole trauma care. Although many advances have been made over the last couple of years, the real multidisciplinary management has remained as a true interdisciplinary challenge. From a pure surgical disease as a single man show, it has grown to a cyto-pathological disease as a team sport! The current presentation will now focus particularly on the multidisciplinary management in multiprofessional teams having a strong focus particularly on possible long term consequences!

However, offering optimal Neurotrauma care in modern times includes a high number of not only surgical challenges, but even much more non-surgical management tasks to provide optimal trauma care. It is of undisputed value that brain trauma remains one of the fundamental problems worldwide and will represent the cutting edge for good outcome and optimal recovery! For example, not even a hundred years ago, craniotomy for evacuation of hematomas was the only modality available to reduce intracranial pressure (ICP) and the maintenance of cerebral perfusion pressure (CPP). Mostly done by special interested surgeons within general surgery because neurosurgery as an own standing discipline didn't exist at that time. Over the decades technical developments within the different involved disciplines and - before all - a new understanding in the power of interdisciplinary management has significantly improved general outcome! From a Neurosurgeon's perspective over the last decades, new technologies like high-end microscopes and other optical instruments (e.g., Orb Eye) as well as new style endoscopes, intraoperative navigation and imaging, high-end neurophysiological intraoperative monitoring, new equipment for precise coagulation, new materials for appropriate reconstruction, multiport invasive measure probes, and some other tools has given us surgical possibilities we never thought and had before. All that has led to the impression, that nearly everything would be possible, and every traumatic brain problem could be solved surgically, which - of course we know nowadays - it's not the fact and not true! But the more technical solutions we've developed, the better our understanding of fundamental biomolecular processes we've got, the more critical we've been about what should be done, and what better should not be done! Today, with an increased critical thinking of what should be done or better should not be done, as well as pitfalls we've had to overcome and what we've learned out of that has changed the paradigm of Neurotrauma Care worldwide. The importance of having most current applicable guidelines and how to integrate them in your daily neurotrauma practice is another important fact which will be handled

in that presentation. It is also a fact that the best treatment will fail if it's not done appropriately or even simply too late! The time-factor in Neurotrauma Care is still what really counts! Therefore "Time is Brain" remains as one of the most essentials in Neurotrauma care, if you lose time, you will lose brain! In addition to that - as a bearer of hope - new additional "Pharmacological Approaches" serving as "Add-On Treatments" (e.g. Cerebrolysin®) offers new possibilities and helps to increase outcome in these patient groups. Nevertheless, we must focus on the decision points in the chain of trauma care! The pathway of trauma care — from on-site emergency care to post-acute care — includes several decision points. Continuity of care through the trauma chain enables delivery of high-quality, cost-effective care. Any delays or inappropriate interventions at these decision points or miscommunication between links in the trauma chain can reduce quality of care and lead to increased risk of complications, poorer recovery, or death! Gaining new knowledge of "Brain Reserve" and other biomolecular options will further increase our possibilities in taking care of those patient groups and enhance solution pathways with a strong impact on long-term consequences!

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## **SEIZURES AFTER TRAUMATIC BRAIN INJURY (TBI): A NEUROSURGICAL PERSPECTIVE**

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**GILRAED MOTA GARCÍA**

Chief of Neurosurgery at UMAE H.E. 14, IMSS, Mexico

Traumatic Brain Injury (TBI) presents a complex challenge in neurosurgery, particularly concerning the onset and management of post-traumatic seizures (PTS) and epilepsy. This presentation aims to delve into the intricacies of seizures following TBI, focusing on epidemiology, pathophysiology, and current treatment modalities. We will explore the categorization of seizures related to TBI, including immediate, early, and late seizures, and discuss their distinct characteristics and implications for patient care. A significant emphasis will be placed on the latest research findings and international guidelines for seizure prophylaxis and management in TBI patients. The presentation seeks to provide a comprehensive overview, combining clinical insights and advanced research, to enhance understanding and management of seizures in TBI, ultimately aiming to improve patient outcomes and quality of life.

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## THE AMN | VISION & MISSION

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### **DAFIN F. MUREȘANU<sup>1</sup>, VOLKER HÖMBERG<sup>2</sup>, JOHANNES VESTER<sup>3</sup>**

1. European Federation of NeuroRehabilitation Societies (EFNR)
2. World Federation for Neurorehabilitation (WFNR)
3. Academy for Multidisciplinary Neurotraumatology (AMN)

The Academy for Multidisciplinary Neurotraumatology (AMN) is a leading international organization driving advancements in neurotrauma care through a comprehensive four-pillar approach: Education, Clinical Practice, Research & Innovation, and Advocacy. Since its establishment, AMN has experienced rapid growth in membership and global partnerships, fostering collaboration among neurotrauma experts worldwide.

AMN is committed to providing comprehensive education and training programs, organizing numerous congresses, workshops, and educational events, including the establishment of the NeuroTrauma Simulation Center in Vienna. Additionally, AMN spearheads cutting-edge research, notably the CAPTAIN and C-RETURN clinical trials evaluating the efficacy of Cerebrolysin® in treating traumatic brain injury (TBI). The organization also conducts real-world evidence projects and the CREST study to further understand and improve TBI outcomes. AMN's pioneering initiatives, such as molecular profiling of neurotrauma and exploration of biological reserve, aim to uncover personalized treatment strategies for neurotrauma patients.

Spearheading the development of international guidelines for early neurorecovery post-TBI, AMN ensures evidence-based, patient-centered care. The Academy's dedication to advancing neurotrauma care is evident in its holistic approach, significantly impacting education, research, and clinical practice globally. The organization continues to pave the way for improved outcomes and enhanced quality of life for neurotrauma patients worldwide.

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## SURGICAL TREATMENT METHODS FOR ACUTE AND CHRONIC POST-TRAUMATIC HYDROCEPHALUS AND RESPONSE TO INFECTION

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### **EUN-SUNG PARK**

Department of Neurosurgery, Wonkwang University Hospital, Wonkwang University School of Medicine, South Korea

Posttraumatic hydrocephalus (PTH) is a pathophysiologic process of progressive cerebrospinal fluid accumulation secondary to the disorder of cerebrospinal fluid circulation and absorption after trauma. It is a commonly seen complication after



craniocerebral trauma and often leads to neurologic impairment and unfavorable prognosis. The incidence of PTH varies from 0.7% to 29% according to the literature. It has been known that subarachnoid hemorrhage is an important factor implicated in the development of PTH. Skull defect following decompressive craniectomy (DC) is reported probably related to the occurrence of PTH.

Posttraumatic hydrocephalus and infections are serious complications following TBI. PTH can present in both the acute and chronic phases after a traumatic brain injury (TBI). The surgical management differs depending on the phase and the specific needs of the patient. Here, we outline the surgical treatments for acute and chronic PTH and address the management of infections associated with these treatments.

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## **RISK FACTORS FOR TRAUMATIC INTRACRANIAL BLEEDING**

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**JURE PRELOŽNIK<sup>1</sup>, KEVIN LAUFER<sup>1</sup>, ANDREJ CRETNIK<sup>2</sup>, MARTIN RAKUŠA<sup>3</sup>**

1. Faculty of Medicine, University of Maribor, Maribor, Slovenia
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**Introduction:** Intracranial haemorrhage (ICH) due to head trauma is one of the major sources of disability and socioeconomic burden in the world. It is estimated that 13 to 35% of patients develop intracranial bleeding after head trauma. Our aim was to evaluate the incidence, mechanisms of injury and clinical characteristics of patients who suffered ICH due to head trauma.

**Methods:** We collected and reviewed data from medical records for patients who sought medical help due to head trauma in the emergency department at University Clinical Centre Maribor during the year 2020 based on ICD-10 codes. We compared the demographic data, clinical characteristics, and laboratory and coagulation studies in patients with and without ICH due to trauma.

**Results:** A total of 316 patients were included in the study, 68 % of whom were men. The 34% of the patients presented with ICH, with the most common being subdural hematoma. Patients with ICH had a lower average Glasgow coma scale at admission (11.6 vs 14.8;  $p < 0.001$ ) and were of older age (66 vs 53 years;  $p < 0.001$ ). Statistically significant factors also fell from height (OR 1.2;  $p = 0.004$ ), superficial skin injuries to the head (OR -0.76;  $p = 0.002$ ), signs of blood in the ear canal (OR 2.5;  $p < 0.001$ ), pupils unresponsive to light (OR 2.2;  $p < 0.001$ ), female gender (OR 0.6;  $p = 0.024$ ) and post-traumatic amnesia (OR 1.5;  $p < 0.001$ ).

Conclusion: Risk factors for ICH in our patients were age, gender, mechanism of injury and clinical features. Healthcare workers who deal with patients who suffer from head trauma should be aware of the risk factors and actively search for them in the assessment of patients with head trauma.

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## **COMPREHENSIVE APPROACHES AND NON-SURGICAL NEUROCRITICAL CARE IN NEUROTRAUMA**

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### **IGNACIO PREVIGLIANO**

Professor of Neurology at Maimonides University and Director of the Critical Care Specialization Course, Maimonides University, Argentina

There is an old discussion about trauma: is it a surgical specialty? Trauma surgeons are convinced that they can handle the complete trauma steps, including critical care upon discharge. But many times they need the help of pulmonary or general ICU physicians and the patient is transferred to a more specialized unit.

Among neurotrauma, the concept was the same. In a very important trauma center in Argentina in 1990 there were two indications in the same sheet: one for the critical care physician, and one for the neurosurgeon, and both were filled with different orders. One indicates dexamethasone and the other suspended it, one indicates a type of ventilator settings and the other a different one. The nurses didn't know what to do and mortality was very high. This tough situation wasn't so common but there was a sort of rivalry between critical care physicians and neurosurgeons. As we began to develop Neurocritical care since 1986, we tried to change this history and started to work elbow to elbow with neurosurgeons. This resulted in a wonderful cooperation and allowed to improve patients' survival, diminishing mortality and morbidity. Neurosurgical residents started rotations in the neuro ICU and Neuro ICU fellows began to rotate in Neurosurgery and Neuroanesthesia. This brief story is why we don't believe in split medical or surgical management, we agree in a patient-centered treatment.

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## **GUIDELINES IN SURGICAL/NON-SURGICAL TREATMENT – WHEN TO OPERATE AND WHEN NOT TO OPERATE?**

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### **MARTIN RAKUŠA**

Division of Neurology, University Medical Centre Maribor, Slovenia

Background: Traumatic brain injury (TBI) is a global health problem. However, treatment approaches differ among countries, which may influence patient outcomes.

This review will present heterogeneity comparing surgical and non-surgical treatment guidelines in selected countries.

Methods: the Brain Trauma Foundation (USA) [1], National Institute for Health and Care Excellence (NICE, UK) [2], Trauma Victoria (Australia) [3] and the European Academy of Neurology (EAN) [4, 5] guidelines were included in this review.

Results: All guidelines include recommendations for conservative care and surgical treatment. The EAN guidelines underscore the importance of a multidisciplinary care approach involving neurosurgeons, rehabilitation specialists, and others [4, 5].

The Brain Trauma Foundation, NICE, Trauma Victoria and the EBIC emphasize thorough hemodynamic management (blood pressure, oxygen) and intracranial pressure control to prevent secondary injury ([1-4]).

Surgery is typically reserved for large hematomas causing mass effect or significant brain shift, or for rapidly deteriorating patients ([1, 2]). In addition, Victoria guidelines recommend surgical intervention for hematomas causing significant neurological decline or impending herniation ([3]).

Discussion: Our analysis demonstrates a global focus on preventing secondary injury through conservative measures, with surgery reserved for severe TBI. However, national variations exist, particularly regarding the emphasis on early assessment and the thresholds for surgical intervention. In the future, we need to optimize TBI management, update guidelines, and potentially standardise protocols globally.

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## ATTENTION DISORDERS

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Traumatic brain injury (TBI) is a major global health burden with an estimated annual incidence of 369 [95% CI: 331-412] per 100,000 persons and 55.5 million TBI survivors accumulating to 8.1 million YLD worldwide. Albeit more than half of TBI survivors suffer from cognitive impairment including attention disorders, less than 30% of TBI patients receive cognitive rehabilitation across Europe. Therefore, we first outline the differences between attentional hyperactivity syndrome and an acquired attention disorder after TBI (Rüb et al., Neurotrauma Reports 2023). Second, we pinpoint the tri-directional relationship of cognitive, affective, and sleep disorders and their differential diagnosis and treatment (Rauen et al., in preparation). Third, we summarize diagnostic and treatment recommendations of the latest INCOG 2.0 Guidelines for Cognitive Rehabilitation Following Traumatic Brain Injury regarding attention and processing speed (Ponsford et al., J Head Trauma Rehabil, 2023). Fourth, we highlight treatment recommendations of attention deficits including direct-attention and metacognitive strategy training to enhance neuroplasticity and daily functioning after TBI (Cicerone et al., Archives Phys Med Rehab, 2019). Finally, we discuss future strategies within the AMN to tackle the unmet treatment needs of acquired attention disorders after TBI over the lifespan.

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## TRAINING COURSE 2 – WEBCAST: NEUROCOGNITIVE ASSESSMENTS AFTER TBI FOR NON-NEUROPSYCHOLOGISTS

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### **KATRIN RAUEN<sup>1,2,3</sup>**

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Neurocognitive assessment is extremely relevant in TBI patients, as TBI serves as the most relevant external risk factor for dementia. Posttraumatic dementia in turn shares typical

hallmarks of neurodegenerative diseases such as Parkinson's, Alzheimer's, or Traumatic Encephalopathy Syndrome (TES) in approximately one third of survivors. According to the large CENTER-TBI and TRACK-TBI observational studies, up to 90% of all TBI patients are initially classified as mildly injured. However, approximately half of patients with no visible brain pathology in the CT brain scan suffer from an incomplete recovery indicated by a Glasgow Outcome Scale Extended (GOSE) below eight out of eight at six and 12 months after the so-called mild TBI. Moreover, the UPFRONT observational cohort study investigated 910 mild TBI patients of which 84% reported posttraumatic complaints, and 45% emotional distress at six months after mild TBI. Therefore, it is of utmost relevance to focus on neurocognitive screening through routine diagnostics at the bedside to identify those TBI patients that need a full neurocognitive assessment and a specific neurocognitive treatment early. Moreover, this training course highlights the tri-directional relationship of posttraumatic cognitive, affective and sleep disorders including the differential diagnosis of posttraumatic delirium and the neurocognitive assessment of these relevant neuropsychiatric burden with implications for post-trauma cognition.

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## COGNITIVE ASSESSMENT AND PATIENT-REPORTED OUTCOMES MEASURES AFTER NEUROTRAUMA - MOST RELEVANT SCALES

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Patients after traumatic brain injury (TBI) may suffer from various consequences, such as long-term cognitive, behavioral, and affective deficits that negatively impact their health-related quality of life (HRQoL) and possibly increase neurodegenerative diseases. Recently, multiple translated and linguistically validated cognitive performance-based outcome measures (PERBOs), clinician-reported outcome instruments (ClinRo), and patient-reported outcome measures (PROMs) have been made available in several languages to evaluate a patient's symptom burden, performance, functional recovery, and mental state after TBI.

The main aim of this workshop is to familiarize the audience with the assessment of neuropsychological outcomes in contemporary adult European patients after TBI:

- **Instruments:** Which are most relevant for determining neuropsychological outcome after TBI?
- **Applicability & interpretation:** How should the instruments be used and how

should the results be interpreted?

- **Research findings:** What are recent results concerning cognitive functioning after TBI?

Secondly, a short overview on the PROMS actually used worldwide after TBI will be presented, in particular, the most sensitive instruments in various clinical subgroups will be highlighted.

This workshop will hopefully enable the audience to select the most relevant instruments for their specific clinical or research questions evaluating the outcome and rehabilitation needs of patients after TBI.

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## NEUROPSYCHOLOGICAL AND PATIENT-REPORTED OUTCOME AFTER TBI

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**NICOLE VON STEINBÜCHEL<sup>1,2</sup>, MARINA ZELDOVICH<sup>1,2</sup>**

1. Institute of Psychology, Clinical Psychology II, University of Innsbruck, Innsbruck, Austria

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This presentation focuses on multidimensional outcome assessment after traumatic brain injury (TBI) including neuropsychological and patient-reported outcomes (PROMs). Cognitive impairment is a potential cause of disability after TBI. Examining the interplay between neuropsychological outcomes, functional recovery, and generic health-related quality of life (HRQoL) is a promising pathway to better understand the role of cognitive impairment after injury. Therefore, post-TBI cognitive functioning (TMT, RAVLT, CANTAB) of N = 1554 individuals across all TBI severities was analyzed using a covariance analysis linked to the levels of disability (GOSE) and generic HRQoL (SF-12v2). Cognitive impairment was particularly evident in patients with less favorable functional recovery (GOSE 3–5), while it was considerably less pronounced at higher GOSE levels (6–8). However, reduced generic mental HRQoL was observed also in the high-level recovery groups. This implies that HRQoL (e.g., mental health or emotional distress) need to be considered when evaluating post-TBI outcomes.

To fill this gap, longitudinal recovery trends after TBI were identified using multivariate latent class mixed models with PROMs. The influence of sociodemographic, premorbid, injury-related, and recovery factors on outcome trajectories was examined using multinomial logistic regression. Four distinguishable classes of outcome were identified: stable good health, improvement, persistent health impairment, and deterioration.

Compared to individuals in stable good health, the groups with persistent problems or deteriorating health showed a lower functional recovery status at three months after TBI, psychological problems, and a lower educational attainment. These vulnerable groups require special attention and long-term clinical monitoring and treatment.

Taken together, this presentation highlights the importance of multidimensional outcome assessment and the need to address mental health outcomes when treating patients after TBI as early as possible. This is especially important given that only less than one-third of the rehabilitation needs for psychological support after TBI are actually met.

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## **PHRAMONGKUTKLAO SIMULATION CENTER AND ITS CAPACITY TO SUPPORT (NEURO)TRAUMA TREATMENT TRAINING**

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### **TANONGSON TIENTHAVORN**

Phramongkutklao Hospital and College of Medicine, Bangkok, Thailand

The Phramongkutklao Simulation Center (PSC) building has been established and utilized in 2021 to embark on improving the capacity to support both undergraduate and postgraduate training within the college of medicine and the hospital. The PSC has evolved over time, adapting to the needs in clinical practices and practices in military medicine. Although simulation-based medical education spanned informally over years, the long-lasting collaboration between the college of medicine and the hospital had formed the need for a more systematic simulation-based education.

Unofficially formed in the late 2010s, the previous PSC had provided simulation-based education for nearly a decade to medical students, nursing students, and healthcare professionals. The current PSC building now consists of five main linked areas supporting training across echelons of medical care. The main clinical areas include eleven flexible teaching rooms and can be rearranged to be a designated field hospital. Additional to these spaces, there is a Wide Area Virtual Environment allocated for training the care at point of wounding in different settings. There is also a cohort ward where nursing and rehabilitative preparation can be taught.

Last but not least, the cadaveric surgical skills unit has facilities which include a twenty two bedded wet laboratory with flexible spaces for working stations. The PSC makes use of fresh cadavers preserving the technique developed by PSC members and providing procedural skills courses to internal and external medical personnels, such as an Advanced Surgical Skills in Exposure in Trauma course. All rooms have audio-visual broadcasting and recording facilities. There are rooms and breakout rooms allowing observation and debriefing of training within any part of the building.

Keywords: Phramongkutklao Simulation Center, military medicine

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## **SPECIAL ASPECTS OF ICU CARE IN sTBI: IS THERE A PLACE FOR NEUROPROTECTIVE DRUGS?**

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### **HELMUT TRIMMEL**

Head of the Department of Anaesthesiology, Emergency and Intensive Medicine  
County Hospital Wiener Neustadt, Austria

Traumatic brain injuries cause enormous individual and socioeconomic burdens. Survivors frequently struggle with motoric handicaps as well as impaired cognition and emotion.

In addition to the primary, mechanical brain damage, complex secondary mechanisms are the main drivers of functional impairment. Many of these pathophysiological mechanisms are well known: excitotoxic amino acids, breakdown of the blood-brain barrier, neuroinflammation with subsequent damage to cell organelles and membranes, cerebral edema, and apoptotic processes triggering neuronal death. However, paracrine resilience factors may counteract these processes.

Specific neuro-protective and neuro-regenerative therapies are few in critical care. Thus, the search for drugs that can effectively limit ongoing posttraumatic neuro-damage is still ongoing.

Nevertheless, there are medications that appear to be beneficial: N-methyl-D-aspartate receptor (NMDA) antagonists (esketamine, amantadine, Mg<sup>++</sup>) reduce excitotoxicity; statins and Cerebrolysin are known to counteract neuroinflammation. Citicoline and Cerebrolysin support impaired mitochondrial energy supply, inhibit oxidative and promote neuro-regenerative processes such as neuro-, angio- and synaptogenesis. Clinical evidence shows an improvement in cognitive and thymopsychic outcomes, which is underlined by our own clinical experience routinely combining different therapeutic approaches. Adjuvant treatment with neuroprotective substances appears to be a promising option in intensive care, although more randomized prospective studies are still needed.

This talk will discuss promising approaches aimed at mitigating secondary damage and promoting neurotrophic processes in sTBI, highlighted by some case studies.



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## **EPILEPSY AND TRAUMATIC BRAIN INJURY**

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### ***NILDA TURGUT***

Professor MD, Tekirdag Namik Kemal University, Faculty of Medicine, Department of Internal Medical Sciences, Neurology Department, Turkey

Traumatic brain injury (TBI) is one of the most common presentations to emergency departments. Brain injuries are highly heterogeneous and can also trigger other neurological complications, including epilepsy, depression, and dementia. Post-traumatic epilepsy (PTE) is a chronic seizure condition after brain injury and a devastating network consequence of TBI. Post-traumatic epileptogenesis is an enduring process by which a normal brain exhibits hypersynchronous excitability after a head injury incident. The initial injury often leads to the development of secondary sequelae; cellular hyperexcitability, vasogenic and cytotoxic oedema, hypoxia-ischaemia, oxidative stress and inflammation. Neuroinflammation is a multifaceted response involving a number of cell types both within the CNS and in the peripheral circulation.

There is currently no approved treatment that can prevent onset of spontaneous seizures associated with brain injury. Improving TBI recovery and preventing seizure onset are complex and challenging tasks.

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## **GUIDELINES FOR MILD AND MODERATE TRAUMATIC BRAIN INJURY**

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### ***PIETER E. VOS***

Department of Neurology, Santiz Slingeland Hospital, Doetinchem, The Netherlands

Of all traumatic injuries to the brain, 90% are considered mild with an annual incidence of 100–300/100 000.

Mild refers to the low probability of acute life threatening- and severe brain damage. Intracranial complications of mild traumatic brain injury (MTBI) like contusions, subdural or epidural hematoma are infrequent (10%), requiring neurosurgical intervention in a minority of cases (1%), but potentially life threatening (case fatality rate 0.1%).

Since the seventies of the last century the clinical severity of traumatic head/brain injuries has been classified using the Glasgow Coma Scale Score (GCS Score). The GCS is usually obtained in the emergency room after a first general surgical investigation

according to Advanced Trauma Life Support principles and following the initial resuscitation. A distinction is made in mild TBI(GCS score 13-15), moderate TBI (GCS score 9-12) and severe TBI (GCS-score  $\leq 8$ ).

International guidelines using the best evidence approach based on the literature exist for assessing the risk for intracranial complications/ rule out intracranial complications by CT scanning after MTBI, home discharge from the emergency department or observation during hospital admission, and assess the risk for post traumatic complaints/ the need for follow up.

A central health management problem of MTBI is the need to exclude the small chance of a life-threatening complication in a large number of individual patients.

Since 2000, in the USA and Europe, highly sensitive prediction rules, with a high level of evidence have been developed for the selective use of CT in patients with mild TBI with or without loss of consciousness. Prediction rules are primarily based on the presence of certain clinical risk factors including loss of consciousness, dangerous mechanism, Glasgow Coma Scale (GCS)  $< 15$ , age, amnesia, focal deficit, signs of (basal) skull fracture, vomiting, anticoagulation therapy, and post-traumatic seizure.

Interestingly, Scandinavian and French guidelines have incorporated blood-based biomarker levels (S100B) for initial management of mild and moderate TBI in adults including criteria for CT scan selection, admission, and discharge with suggestions for monitoring routines and discharge advice for patients.

Differences exist among guidelines in the evaluation of moderate TBI. Where a GCS score of 9-12 is considered moderate in several guidelines, others, based on the recognition of the high frequency of intracranial lesions in patients with a GCS score of 13 classify moderate TBI as a GCS score of 9-13. For this reason management of moderate TBI is often reviewed within the context of severe TBI.

Since 2001, recommendations, although with a lower level of evidence, have also been published for clinical observation in hospitals to prevent and treat other potential threats to the patients, including behavioral disturbances (amnesia, confusion and agitation) and infection.

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## **ESTABLISHING AND MANAGING A NEUROTRAUMA BOARD: BEST PRACTICES AND INNOVATIONS**

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### ***HARALD K. WIDHALM***

Clinical Division of Traumatology, Department of Orthopedics and Traumatology,  
Medical University of Vienna, Austria

Head trauma presents a significant challenge in modern medicine, requiring multidisciplinary expertise and coordinated care to optimize patient outcomes. The emergence of neurotrauma boards has revolutionized the management of these complex cases by providing a platform for collaboration among specialists. This abstract delves into the fundamental principles and practical considerations for establishing and running a neurotrauma board, drawing upon the collective experiences of renowned experts in the field.

Key topics covered include the composition and roles of a neurotrauma board, emphasizing the importance of diverse representation from neurosurgery, trauma surgery, neurology, critical care, neuroradiology, emergency medicine, and rehabilitation services. Strategies for effective communication, decision-making frameworks, and protocols for rapid assessment and intervention will be elucidated, with a focus on optimizing resource utilization and streamlining care pathways.

In addition, this summary examines innovative approaches to improving the functionality of neurotrauma boards, as the development of concepts to enable the best possible multidisciplinary collaboration, which should ultimately benefit the patient.

Through a comprehensive analysis of successful neurotrauma board implementations and case studies highlighting challenging scenarios, this lecture aims to equip attendees with the knowledge and tools necessary to establish and sustain a dynamic neurotrauma board within their respective institutions. By fostering a culture of collaboration and continuous improvement, neurotrauma boards serve as a cornerstone in the pursuit of excellence in head trauma management, ultimately improving patient outcomes and reducing the burden of neurotraumatic injuries on society.

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## **EARLY START OF GENERAL AND TARGETED THERAPIES IN TBI**

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### **ANDREAS WINKLER**

Medical Director of the Institute Neuromed, Center for Clinic Sciences in Neurology, Vienna, Austria

In general, in the neurological rehabilitation of people with moderate and severe brain injuries (TBI), it is assumed that the early start of both general (“out of bed activities”) and targeted (“task and goal oriented therapies”) results in a quicker and more complete recovery. The extent to which the ultra-early start of rehabilitative measures (e.g. within 24 hours) is advantageous in the case of TBI has not yet been clarified. The best data is currently available from studies of the rehabilitation of people after a stroke (ischemic stroke), and is also largely used in everyday clinical rehabilitation for people with traumatic brain injuries. In my statement, I will address the open questions about early rehabilitation after TBI and, in addition to the existing data, will also present exemplary situations in which the data speaks against the particularly early start of rehabilitative measures.

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## **ASPECTS OF EARLY NEUROREHABILITATION AFTER SEVERE TBI**

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### **ANDREAS WINKLER**

Medical Director of the Institute Neuromed, Center for Clinic Sciences in Neurology, Vienna, Austria

TBI has the highest incidence amongst neurological disorders worldwide. The occurrence of TBI is mainly caused by road traffic accidents in low-income and middle-income countries. In high-income countries, the most common cause of TBI are falls, especially in elderly people. The initial depth of unconsciousness based on the GCS (Glasgow Coma Scale), the duration of coma and the duration of PTA (Post Traumatic Amnesia) are used as criterias of the severity of TBI suffered. A delayed regained consciousness is associated with a poor outcome. The aim of early rehabilitation (ER) in the best-case scenario is that patients after severe TBI can participate in their daily lives in the best possible way. As a part of rehabilitation treatment in a multidisciplinary team, this aim is worked on individually in an interdisciplinary manner. A multidisciplinary team consists of physicians, nurses, physical therapists, occupational therapists, logopaedics, neuropsychologists, and social workers. It can be a balancing act between supporting and overwhelming patients in this early stage. Early mobilization techniques are important to prevent complications such as contractures, muscle atrophy and pressure ulcers, but nevertheless, sufficient rest and sleep are necessary for a good recovery too. Some medications may be used to manage symptoms such as spasticity, agitation, pain, or sleep disturbances, which can interfere with rehabilitation efforts. Early rehabilitation

in individuals after severe TBI focuses on optimizing arousal, preventing complications, and facilitating the recovery of function to improve outcomes and quality of life. Overall, patients who receive ER benefit from a reduced length of stay in hospital and from a reduced ongoing care too.

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# **CURRICULUM VITAE**





# ANTÓN ÁLVAREZ

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**1997** Psychiatry Doctor, Academic Thesis, Ph.D., Department of Psychiatry,

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**1997 - 1999** Post-doctoral Grant (National Plan of Scientific Research & Technical Development)  
Basic and Clinical Research Director, CIBE, A Coruña

**1999 - 2012** Director of Neuropharmacology and Medical Director  
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**2009 -** Associated Researcher, Granada University (SICA INVS59201)

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**2010 - 2014** Head of the Research Directorate, Fundación Antidemencia Al-Andalus, Spain

**2012 -** Director of the Medinova Institute of Neurosciences, Clinica RehaSalud, A Coruña, Spain

**2013 -** Visiting Professor, Department of Neurosciences, Faculty of Medicine,

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## RESEARCH PROFILE

Antón Álvarez has more than 30 years expertise in Basic and Clinical Research on Alzheimer's disease and Neuropsychiatric disorders. He was involved in a number of research projects, including projects funded by Public Institutions, pharmaceutical R&D studies, clinical trials, industrial and R+D+I projects, epidemiological studies, and projects funded by the EU. As a result of his research activity Antón Álvarez published more than 100 scientific papers and book chapters.

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6. Álvarez XA, Aleixandre M, Linares C, Masliah E, Moessler H. Severity-related increase and cognitive correlates of serum VEGF levels in Alzheimer's disease ApoE4 carriers. *J Alzheimers Dis*. 2018; 63: 1003-1013.
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8. Álvarez XA, Álvarez I, Iglesias O, Crespo I, Figueroa J, Aleixandre M, Linares C, Granizo E, Garcia-Fantini M, Marey J, Masliah E, Winter S, Mureşanu D, Moessler H. Synergistic Increase of Serum BDNF in Alzheimer Patients Treated with Cerebrolysin and Donepezil: Association with Cognitive Improvement in ApoE4 Cases. *Int J Neuropsychopharmacol*, 2016;19(6):1-6.
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10. Álvarez XA, Aleixandre M, Linares C, Masliah E, Moessler H. Apathy and APOE4 are associated with reduced BDNF levels in Alzheimer's disease. *J Alzheimer's Dis*, 2014;42:1347-1355
11. Álvarez XA, Figueroa J, Mureşanu D. Peptidergic drugs for treatment of traumatic brain injury. *Future Neurology*, 2013;8(2):175-192
12. Álvarez XA, Linares C, Masliah E. Combination drug therapy for the treatment of Alzheimer's disease. *European Neurological Review*, 2012;7(2):92-102
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15. Álvarez XA, Cacabelos R, Sampedro C, Aleixandre M, Linares C, Granizo E, Doppler E, Moessler H. Efficacy and safety of Cerebrolysin in moderate to moderately severe Alzheimer's disease: results of a randomized, double-blind, controlled trial investigating three dosages of Cerebrolysin. *Eur J Neurology*, 2011, 18: 59-68.



16. Álvarez XA, Fuentes P. Cerebrolysin in Alzheimer's disease. *Drugs Today*, 2011; 47(7):487-513.
17. Mureşanu DF, Álvarez XA, Moessler H, Novak PH, Stan A, Buzoianu A, Bajenaru O, Popescu BO. Persistence of the effects of Cerebrolysin on cognition and qEEG slowing in vascular dementia patients: results of a 3-month extension study. *J Neurol Sci* 2010, 299(1-2):179-83
18. Álvarez, XA, Sampedro, C., Cacabelos, R., Linares, C., Aleixandre, M., García-Fantini, M., Moessler, H. Reduced TNF-alpha and increased IGF-I levels in the serum of Alzheimer patients treated with the neurotrophic agent Cerebrolysin. *Int J Neuropsychopharmacol* 2009, 12:867-872
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20. Álvarez, X.A., Sampedro, C., Figueroa, J., Tellado, I., García-Fantini, M., Cacabelos, R., Moessler, H. Exploratory study of qEEG slowing in patients with postacute traumatic brain injury: Changes over one year and effects of the neurotrophic compound Cerebrolysin. *J Neural Transm* 2008, 115: 683-692.
21. Mureşanu D.F., Álvarez, X.A., Moessler, H., Buia, M., Stan, A., Pinteá, D., Moldovan, F., Popescu, B.O. A pilot study to evaluate the effects of Cerebrolysin on cognition and qEEG in vascular dementia: Cognitive improvement correlates with qEEG acceleration. *J Neurol Sci* 2008, 267: 112-19
22. Algorta J, Pena MA, Maraschiello C, Álvarez A, Maruhn D, Windisch M, Mucke AM. Phase I clinical trial with desoxypeganine, a new cholinesterase and selective MAO-A inhibitor: Tolerance and Pharmacokinetics study of escalating single oral doses. *Methods Find Exp Clin Pharmacol* 2008; 30: 1-7.
23. Álvarez, A., Cacabelos, R., Sampedro, C., García-Fantini, M., Aleixandre, M. Serum TNF-alpha levels are increased and correlate negatively with free IGF-I in Alzheimer disease. *Neurobiol Aging* 2007, 18(4): 533-36.
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26. Crook, T.H., Ferris, S.H., Álvarez, X.A., Laredo, M., Moessler, H. Effects of N-PEP-12 on memory among older adults. *Int Clin Psychopharmacol*, 2005, 20:97-100
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28. Miguel-Hidalgo, J.J., Álvarez, X.A., Cacabelos, R., Quack, G. Neuroprotection by memantine against neurodegeneration induced by beta-amyloid(1-40). *Brain Res* 2002, 958(1), 210-221.



# AGATA ANDRZEJEWSKA

## POLAND

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### CONTACT DETAILS

**Name:** Agata Andrzejewska

**Address:** Szczecin, Poland

**Phone number:** 0048605673463

**Date of birth:** 30.11.1987

**E-mail:** agata87.andrzejewska@gmail.com

### EDUCATION:

**2006 - 2012** Pomeranian Medical University - Doctor of Medicine MD – graduated with honors

**2022** Pomeranian Medical University, Szczecin, Poland - PhD – “*Evaluation of the effects of treatment of the hepatorenal syndrome in patients with cirrhosis treated at the Department of Hepatology and Internal Diseases of the Medical University of Warsaw after 2015*”.

### ADDITIONAL ACTIVITIES DURING MEDICAL SCHOOL

**26/06/2010 - 25/07/2010** Practice in Queen Elizabeth Hospital in Birmingham UK

**2009 - 2012** Active participant of the Hepatology students research club PMU, Szczecin

**2011 - 2012** Active participant of the Anesthesiology and Intensive Care students research club PMU, Szczecin

### EXPERIENCE

**01/10/2012 - 31/10/2013** University Hospital no.1 Szczecin, Poland, postgraduate internship

**11/2013 - 02/2015** Department of Hepatology and Internal Diseases of the Medical University of Warsaw, junior assistant

**2015 - 2021** Anesthesiology and Intensive Care Department, University Hospital no.1 Szczecin, Poland, residency

**18/12/2020** The European Diploma in Anaesthesiology and Intensive Care examination (EDAIC)

**2021** Title of DESAIC (Diplomate of the European Society of Anaesthesiology and Intensive Care)

**2024** Observership at The Johns Hopkins Hospital

### OTHERS

- Lecturer and proctor in haemodynamic monitoring systems in the OR with Hypotension Prediction Index technology (Edwards)
- Conference organizer: West Pomeranian days of Neuroanesthesiology and Neurosurgery (Poland)
- Conference organizer of local 3rd European Day of Regional Anaesthesia
- Lecturer during multiple polish and international conferences.
- Member of Polish Anesthesiology and Intensive Care Society, European Regional Anesthesia

## SCIENCE INTEREST

Patient blood management, ERAS, critical care, neurocritical care and acute brain injury.

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## HEINRICH BINDER AUSTRIA

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## PERSONAL INFORMATION

Name: BINDER Heinrich, MD, Professor for Neurology

Date of birth: 3<sup>rd</sup> of Dec 1947

Nationality: Austrian

Phone: +(43) 69910109209

e-mail: heinrich.dr.binder@outlook.com

**1965 - 1972** Faculty of Medicine at University Vienna; MD since doctorate at 1972, June 6<sup>th</sup>

**1972 - 1978** University Hospital for Neurology, Vienna – residency

**1975-1990** neurological consultant in 5 Viennese pediatric hospitals, in the interim also in one orthopedic hospital

**since 1978** neurologic and psychiatric specialist

**1982** lecturer for neurology, (“venia docendi”)

**1984 -1989** senior staff member at the Viennese University Neurological Clinic

**1985 - 2008** founding member and Secretary General of the Austrian Society for Neurorehabilitation

**since 1988** Professor for Neurology, University Vienna

**1989 - 2002** Head of the Neurological Hospital “Maria Theresien-Schlössel”,

**1990/1991** study visits in Baylor College of Medicine / Houston, Prof. Milan Dimitrijevic

**1994-2007** Head of Ludwig Boltzmann Institute for Restorative Neurology and Neuromodulation together with Prof. Franz Gerstenbrand

**2002 – 2016** Head of the “Neurological Center” at the Otto Wagner Spital /Vienna

**2008 - 2017** Deputy Head of Landsteiner Institute for Neurorehabilitation and Space Medicine

**2009** Founding member and Founding President of European Federation neurorehabilitation Societies

**2008-2015** President of the Austrian Society for Neurorehabilitation

**2010-2019** Chairman of the WFNR-SIG “Early Neurorehabilitation”

**Since 2017** Director , Health Policy Group AOER-Organization for Economic Relations

**Since 2019** neurological consultant ADELI Rehabilitation Center Piestany/Slovakia

**Since 2021** Chairman of the Special Interest Group/WFNR “Neurophilosophy” together with Giorgio Sandrini

EFNR Honorary president

### **Memberships**

- Member of the Management Committee of the World Federation NeuroRehabilitation (WFNR)
  - Member of the Executive Board of the European Federation of Neurorehabilitation Societies (EFNR)
  - Vice-President of the Scientific Advisory Board of the Austrian Neurorehabilitation Society (OEGNR)
  - Member of the Managing Board of the International Danube Symposium
  - Member of the Editorial Board of Journal of Medicine and Life
  - Member of the Advisory Board of Confinia Cephalalgica et Neurologica
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**DANA BOERING**  
**GERMANY**

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German neurologist with over 30 years of expertise in the field of neurorehabilitation, for the most part working as Assistant Medical Director under the leadership of Professor Volker Hömberg, across two different clinics.

The main fields of interest are early rehabilitation, with emphasis on disorders of consciousness, and the management in the subacute phase after severe TBI, as well as spasticity management. A constant issue was recovery after stroke, focusing on a specific concept of impairment-oriented training, as well as the assessment and management of motivational disorders after acquired brain injury.

Research work with the Neurological Department of the University of Essen focused on the role of the cerebellum in motor recovery after stroke, and with the Coma Science Group in Liege, Belgium, on the assessment of nociception in patients with disorders of consciousness. Currently working as Secretary General of the European Federation for Neurorehabilitation and Chair of the Special Interest Group on Motivation in Neurorehabilitation of the World Federation of NeuroRehabilitation (WFNR).



## **PANU BOONTOTERM**

### **THAILAND**

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#### **PERSONAL INFORMATION**

Lieutenant Colonel Assistant Professor Panu Boontoterm

Date of Birth : 22 August 1985

Place of Birth: Bangkok, Thailand

Current position: Consultant Neurosurgeon and intensivist, Head of surgical intensive care unit, Phramongkutklao Hospital, Bangkok, Thailand

Affiliation: Division of Neurological surgery unit, Department of Surgery and Division of Critical Care Medicine, Department of Medicine, Phramongkutklao Hospital, Bangkok, Thailand

Country: Thailand

Email ID: sapiens\_panu@hotmail.com

Mobile phone +66879128696

#### **EDUCATION AND PROFESSIONAL TRAINING**

Diploma, Critical Care Medicine, Phramongkutklao Hospital, 2021

Diploma, Neurological surgery, Phramongkutklao Hospital, 2017

M.D., Doctor of Medicine, Faculty of Medicine, Phramongkutklao college of medicine, Mahidol University, 2009

#### **WORK EXPERIENCE**

- Internist, Fort Prachaksilpakhom hospital, 2009-2012
- Neurological Surgery residency training in Diplomat Thai Board of Neurological Surgery, Phramongkutklao Hospital, 2013 - 2017
- Staff Neurosurgeon, Yala hospital, 2017-2019
- Fellowship in Diplomat Thai Board of Critical Care of Medicine Phramongkutklao Hospital, 2019 - 2021
- Staff Neurosurgeon and Intensivist, Division of Neurological surgery unit, Department of Surgery and Division of Critical Care Medicine, Department of Medicine, Phramongkutklao Hospital 2021 - present

Specialist: Neurosurgeon and Intensivist

Academic position: Assistant Professor

#### **PUBLICATIONS**

1. Boontoterm P, Feungfoo P. Passive Leg Raising Effect At Resuscitation Among Patients With Vasoplegic State. J Southeast

Asian Med Res. 2021Nov;9;5(2):67. <https://www.jscamed.org/index.php/jscamed/article/view/100> DOI: <https://doi.org/10.55374/jscamed.v5i2.100>

2. Boontoterm P, Sakoolnamarka S, Feungfoo P, Udommongkol C. Cut Off Value Of Good Pronostic Factor Outcomes In Large Territory Ischemic Stroke Undergoing Early Decompressive Craniectomy. J Southeast Asian Med Res. 2022Mar.17;60:e0102. <https://www.jscamed.org/index.php/jscamed/article/view/102> DOI: <https://doi.org/10.55374/jscamed.v6i0.102>
3. Fuengfoo P, Jongstapongpan A, Hansiriphan P, Srisawat N, Detporntewan P, Pinyoteppratarn R, Boontoterm P, Palwatwichai A, Phanchaorenkit N. Spontaneous intestinal perforation in critical COVID: A case report . Clin Crit Care [Internet]. 2022 Jul. 17;30:2022:e0012. <https://he02.tci-thajjo.org/index.php/ccc/article/view/256874>



## **BASSEM BOULOS SAAD**

### **EGYPT**

#### **CONTACT DETAILS**

Prof. Dr. Bassem Boulos Saad  
PO Box 170 Al-Obour City, Egypt  
6 Mohamed Elfateh Kareem, al-Hay  
al-Sabe'i, al Obour City, Egypt  
Date of Birth: 20th of April, 1959.  
Mob: 01222167707

- Prof. of intensive care, Ain Shams University
- General manager of Italian hospital
- Director of ICU, Italian hospital
- Director of ICU, EI Salam Hospital, Mohandisseen.

#### **TEACHING EXPERIENCE**

Throughout my teaching career, I used to teach small groups as a Teaching Assistant about energy flow through organisms. Carbohydrates, Lipids, Protein as the building blocks of life with some background around transportation through the cell membrane and nuclear division. These basic elements of science were given to medical students as research assignments in order to encourage discussion and interaction between the staff and the students.

As a lecturer, more specific information about gaseous exchange, respiratory system, smoking and its related diseases, infectious diseases, immunology, energy and respiration were main elements to prepare students to understand a lot about the circulatory and respiratory systems which are crucial to be understood for any physician during patient anaesthesia besides the main courses

related to anaesthesiology. In the small group, every student should prepare his assignment and present it then it's to be discussed by his colleagues. I used to prepare my own questions aiming to improve understanding about the applied science and how can the student use this piece of information in saving lives of the anesthetised person.

## **EDUCATION**

Diploma of the EGSPEN The Egyptian society of Parenteral and Enteral Nutrition (2010).

Professor degree of Anesthesia and Intensive care (2005)

Doctorate Degree in Anesthesia and Intensive Care (MD) (1994)

Master's degree in Anesthesia and Intensive Care (1989)

Diploma in internal medicine, with Very Good (1991)

B. Sc. MD, with very good with honor (1982)

## **CURRENT POSITION**

General manager of Ain-Shams University Specialized Hospital, Obour, 2017 till present.

Board member of the Egyptian Society of Intensive Care.

Professor of Anesthesia and Intensive Care, Faculty of medicine, Ain Shams University, Egypt.

Member of the board of Clinical Nutrition Master's degree program, Ain Shams University.

Director of ICU, Ain Shams University Specialized Hospital, Obour City

Director of ICU, El Salam Hospital, Mohandisseen.

Director of ICU, Italian Hospital in Cairo "Umberto I".

Member of the national society of critical care in Egypt

## **MEDICAL STAFF CAREER**

- **Professor of Anesthesia and Intensive Care, Ain Shams University (2005-Present)**  
Teaching master and post-doctorate candidates.  
Supervising different MSc and MD theses.  
Sharing in examining boards of Ain Shams University and other universities.  
Attending and actively participating in various national and international medical conferences.
- **Assistant Professor in Anesthesia and Intensive Care Department, Ain Shams University (1999-2004)**  
Presenting lectures for MSc and MD post graduates.  
Supervising different MSc and MD thesis.  
Member of Examining Boards of different universities.  
Attending and participating in different national and international conferences.
- **Lecturer in Anesthesia and Intensive Care Department, Ain Shams University (1994-1999)**  
Responsible for teaching and training programs of assistant lecturers.  
Sharing in the teaching program of under and post graduates. Preparing exams and assessment sheets for under and post graduates.

Member of the supervising staff working on MSc thesis for assistant lecturers.

- **Assistant lecturer in anesthesia and intensive care department, Ain Shams University (1989- 1994)**

Responsible for teaching and training programs of residents.

Preparing and organizing lecturing schedule for staff members.

Performing various research works and activities. Working in my MD thesis titled: Effect of Hypoalbuminemia on Dose and Duration of Action of Different Non-Depolarizing Muscle Relaxants.

- **Resident in Ain Shams University Specialized hospital (1984-1989)**

Attended different teaching and training programs in (Cardiopulmonary resuscitation, fluid and electrolyte management, difficult airway management, Mechanical ventilation, neonatal resuscitation).

Preparing my MSc thesis titled: Post operative acute renal failure.

- **House officer, Al-Demerdash hospital and Ain Shams University Hospitals (1983-1984)**

## **MEMBERSHIP - SCIENTIFIC & PROFESSIONAL ORGANIZATIONS**

- Member of the Egyptian Board of Critical Care
- Board member for the Ain Shams University Master's Degree program for Clinical Nutrition
- Member of the Egyptian Society Of Intensive Care And Anesthesia
- Member of ESPEN, European Society Of Parenteral And Enteral Nutrition
- Member EGSPEN, Egyptian Society of Parenteral and Enteral Nutrition
- Member of the Infection Control Committee in Elsalam Hospital in Cairo
- Member of the Technical Committee in Italian Hospital in Cairo

## **CONFERENCE PARTICIPATION AND RESEARCH WORK**

Participating in American Society of Anesthesiology (ASA) 2017 & 2018.

Participating in (ISICEM) Brussels, 2000-2019.

Participating in (ECCMID) 2008\_2019.

Alexandria Society of Intensive Care and Anaesthesia Conference (ASIAC):

Annually attending 2000- In Alexandria, Egypt

Actively participating as a speaker presenting the following topics:

- New Trends In Cardiopulmonary Resuscitation
- Noncardiogenic Chest Pain
- Immunoglobulins in sepsis: When, How and Why?

## **International Symposium on Intensive Care and Emergency Medicine: ISICEM**

Annually attending 2000 - 2011 In Brussels, Belgium

**European society of Anesthesiologists: ESA** 2008 In Munich, Germany.

## **Biotest Annual conference**

Actively participating as a speaker 2004 in Kuala Lumpur: Actively participating as a speaker 2006 in Amman, Jordan:

- The use of pentaglobin in sepsis



### **Italian Conference for the Study and Research on ulcers, sores, wounds and tissue repair (Congresso Nazionale Co.R.T.E)**

Actively participating as a speaker 2008 in Rome, Italy:

- IV Ig in sepsis

### **National Coagulopathy Conference**

Actively participating as a speaker 2008 in Sokhna, Egypt:

- Risk of Coagulopathy in Intensive Care

### **Pan Arab International Conference of Critical Care and Emergency Medicine - (PAICCEM)**

Actively participating as a speaker 2010 in Sharm Elsheikh, Egypt:

- Nutritional Aspects In Critically Ill Patients

### **RESEARCH WORK**

1. Efficacy and Safety of Lucifer in management of patients of different neurological disorders, Bassem said, Mary Wade & Sharif Hashem. International Journal of Internal Medicine, 2018.
2. Trancetympnic drugs for tinnitus Management: Comparative study between Lidocain and Garamycin. Published in Ain Shams medical Journal Vol. 61, No 7, 8 & 9, 2010.
3. Intra-articular Morphine, Ketamine and Neostigmine for post-operative analgesia after knee surgery. Published in the Egyptian journal of Anaesthesia Vol. 14, No 1, January 2000.
4. Comparative study between the effect of Ranitidine and Lanzoprazole on gastric secretions (PH and volume) in intensive care patients. Published in the Egyptian journal of Anaesthesia Vol. 14, No 2, July 2000.
5. Role of N-methyl D-aspartic acid receptor antagonists in post-operative analgesia: A study of the pre-emptive effects of Ketamine and Magnesium sulfate on post operative analgesic requirements. Published in the Egyptian journal of Anaesthesia Vol. 13, No 1, January 2011.
6. Effect of chronic Nicotine exposure on dose requirement of different non-depolarizing muscle relaxants. Published in the scientific journal of Girls Azhar University. Vol. 12, No 1, January 1996.
7. Study of the effect of Ketamine on the duration of action of different nondepolarizing muscle relaxants. Published in the Egyptian journal of Anesthesia Vol. 12, No 1, January 2015.
8. Comparative study between the effect of halothane and isoflurane on duration of action of different non depolarizing muscle relaxants. Published in the Egyptian journal of Anesthesia Vol. 11, No 2, July 1995.
9. The value of peri hepatic packing in major liver trauma (hemodynamic study). Published in the Scientific journal of Girls Azhar University, Vol. 17, No 1, January 2018.
10. Study of Histamine release during pediatric cardiac surgery. Journal of Egyptian society of Intensive Care Vol. 3, No. 2, September, 2020.

### **SUPERVISED MSc THESES Including**

1. Anesthesia for rapid detoxication (2011).
2. Sepsis indicators and mediators in intensive care units (2007).
3. Cytokines in intensive care units (2004).
4. Pre-emptive protection in anesthesia (2003).
5. Anesthesia and abnormal hemoglobin (2002).
6. Thermal Disturbances in critically ill patients (2000).
7. Latex allergy in anesthesia (2000).
8. Nutritional aspects in ICU patients (1999).
9. Anesthetic implications in fetal surgery (1999).
10. Life threatening bronchial asthma and its management (1998).
11. Implications of molecular biology in anesthesiology (1998).
12. Peri-operative pulmonary complications (1997).
13. Pancreatic tumors in relation to anesthesia (1995).

### **SUPERVISED MD THESES Including**

1. Intrathecal hyperbaric ropivacaine versus Bupivacaine in turp- comparative study (2007).
2. Comparative study between Isradipine and Hydralazine peri-operative cases (2007).
3. Management of preoperative hypertension (2008).
4. Comparative study between continuous epidural infusion of Bupivacaine with Sufentanyl and Fentanyl alone in treating labor pains (2011).



## **FELIX-MIRCEA BREHAR**

### **ROMANIA**

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Dr. Felix-Mircea Brehar MD, PhD (b. 1976) graduated (BSc) in Medicine in 2000 (University of Medicine and Pharmacy Iuliu Hatieganu, Cluj-Napoca). PhD by the University of Medicine and Pharmacy Carol Davila, Bucharest, 2010. Since 2002, neurosurgeon (resident 2002 – 2008 and full neurosurgeon since 2009) at the Bagdasar Arseni Clinical Emergency Hospital, Bucharest. Since 2018 head of the Stereotactic and Functional Neurosurgery Department. Associated Professor at Carol Davila University of Medicine and Pharmacy, Bucharest.

Twenty-one indexed papers in international peer-review journals (h-index: 8), including publications in Q1 prestigious journals such as Neuro-Oncology, International Journal of Molecular Sciences, Critical Care and Neurosurgery. Editor of the book Experimental Models in Glioblastoma Research from Nova Science Publishers. Reviewer for Neurological Research and

Frontiers in Oncology. Presently working in stereotactic neurosurgery and neurosurgical tumour pathology, with a special interest in glioblastomas, as well vascular and traumatic neurosurgical procedures.

Granted as scientific coordinator in research projects such as PNCDI II, 41\_035 / 2007 (Tumorstem, 2007-2010, Romanian Ministry of Research) and CEEEX Module I, contract 176/2006 (Gliostemcel, 2006-2008), project director for Grant no. 42 / 30.04.2013: A new anti-invasive experimental strategy for infiltrative malignant gliomas (2013-2016), member of the ERAPerMed project Integrative Personal Omics Profiles in Glioblastoma Recurrence and Therapy Resistance (PerProGlio) 2019-2022. Member of the Romanian Society of Neurosurgery (RSN), Congress of Neurological Surgeons (CNS), European Association of Neuro-Oncology (EANO) and also member of the Executive Committee of the European Society for Stereotactic and Functional Neurosurgery (ESSFN).

Bagdasar Arseni Clinical Emergency Hospital is a reference center serving a population of 4 million inhabitants in Bucharest and neighbouring counties. Approximately hundred patients/year undergo neurosurgery for brain tumours, most of them glioblastomas. It has high performant neurosurgical facilities like Zeiss Kinevo 900 microscope integrated with Stealth 8 Medtronic, neuronavigation facilities, ultrasonic aspirator, craniotome. Regarding MRI/MRS(I) equipment, a GE SIGNA Architect 3.0T is available, in addition to the Philips 1.5T, thus with capabilities to produce MRI and MRSI data from patients at diagnostic and therapy follow-up established time points.

## **FIVE SELECTED PUBLICATIONS RELATED TO THE ABOVE-MENTIONED PROJECT WITHIN THE LAST 5 YEARS**

1. Miguel Cosenza-Contreras, Agnes Schäfer, Justin Sing, Lena Cook, Maren N Stülger, Chia-Yi Chen, Jose Villacorta Hidalgo, Niko Pinter, Larissa Meyer, Tilman Werner, Darleen Bug, Zeno Haberl, Oliver Kübeck, Kai Zhao, Susanne Stei, Anca Violeta Gafencu, Radu Ionita, Felix M Brehar et al. Proteometabolomics of initial and recurrent glioblastoma highlights an increased immune cell signature with altered lipid metabolism. *NEURO-ONCOLOGY*. 2023, XX(XX), 1-15. <https://doi.org/10.1093/neuonc/noad208>
2. Radu R, Petrescu GED, Gorgan RM, Brehar FM. GFAP8: A Promising Biomarker and Therapeutic Target in Glioblastoma. *Front Oncol*. 2022; 12:859247. doi:10.3389/fonc.2022.859247.
3. Torsin LI, Petrescu GED, Sabo AA, Chen B, Brehar FM, Dragomir MP, Calin GA. Editing and Chemical Modifications on Non-Coding RNAs in Cancer: A New Tale with Clinical Significance. *Int J Mol Sci*. 2021; 22(2):581. doi:10.3390/ijms22020581. doi: 10.1080/01616412.2020.1803604.
4. Brehar FM, Dragomir MP, Petrescu GED, Gorgan RM. Fighting Cancer Stem Cell Fate by Targeting LIS1 a WD40 Repeat Protein. *Front Oncol*. 2019; 9:1142. doi: 10.3389/fonc.2019.01142.
5. Brehar FM, Gafencu AV, Trusca VG, Fuior EV, Arsene D, Amairch M, Giovani A, Gorgan MR. Preferential Association of Lissencephaly-1 Gene Expression with CD133+ Glioblastoma Cells. *J Cancer*. 2017 May 11;8(7):1284-1291. doi: 10.7150/jca.17635.



## CĂTĂLINA CRIȘAN

### ROMANIA

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Cătălina A. Crișan is a specialist in Adult Psychiatry and Lecturer at the Department of Neurosciences, Discipline of Psychiatry and Pediatric Psychiatry, University of Medicine and Pharmacy Iuliu Hatieganu Cluj-Napoca. Her research interests are devoted towards the evaluation of the awareness of disease in psychiatric disorders and possible coping mechanisms used by patients or general population in crisis situations, forensic psychiatry, and the evaluation of psychiatric symptoms in neurodegenerative disorders, especially Huntington's disease.

Her expertise in the field of psychiatry is completed with courses in the field of psychosis and mood disorders at Maudsley Forum, King's College London (2007), Mental Health Futures: Schizophrenia Masterclass, Madrid, 2013, and the project *European standards for competitive postdoc formation programs in the domain of advanced research and forensic psychiatry* (2011-2013). She is a member of the New Commission of psychiatric forensic expertise. Currently, she is a member of the Huntington's disease service in Romania and actively involved in the evaluation of the patients and families with HD.

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## DANIEL CSOMOR

### AUSTRIA

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Anaesthesia and Intensive Care Medicine at Department of Anaesthesia, Emergency and General Intensive Care in General Hospital in Wiener Neustadt, Austria since 2007  
Emergency Medicine at Emergency Medical Helicopter Christophorus 3, in ÖAMTC Flugrettung in Wiener Neustadt, Austria, since 2007  
Full Instructor in Medical Simulation at Centre of Medical Simulation und Patient Safety of Lower Austria in Hohegg, Austria

#### TEACHING

**pregradual:** at Medical Faculty of Sigmund Freud Private University, Vienna, Austria

**postgradual:** courses and refreshers for emergency medical doctors in Austria Medical Chamber



## **DAI HA DUONG**

### **VIETNAM**

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#### **PERSONAL INFORMATION**

**Full name:** Dai Ha Duong

**Date of birth:** 1<sup>st</sup> November 1973

**Profession and Affiliation:** Neurosurgeon at Viet Duc University Hospital and lecturer at Hanoi Medical University

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#### **JOB TITLE**

Dai Ha Duong, M.D, Ph.D., Faculty, Department of Surgery, Hanoi Medical University

Vice-chief, Neurosurgery Department, Viet Duc University Hospital

Chief, Scientific research Department, Viet Duc University Hospital

Associate. Professor, Hanoi Medical University

General Secretary of Vietnam Neurosurgical Society (from 2022 – now)

Chief, Neurosurgery and Spine Surgery, Hanoi Medical University Hospital, Hanoi, Vietnam.

#### **PRACTICE EXPERIENCE**

**1990-1996** Hanoi Medical University (Medical student)

**1996-2000** Viet Duc University Hospital (Resident doctor)

**2000-2001** Haute Pierre Université Hospital – Strasbourg – France (FFI (Fellowship training in neurosurgery))

**2008 (3 months)** Toranomon Hospital - Tokyo, Japan (Fellowship training in neurosurgery)

**2011 (6 months)** University of Colorado - Denver, USA (Visiting doctor)

**2015-now** Hanoi medical University Viet Duc University Hospital (Faculty, Department of Surgery, Deputy chief of Neurosurgery Department)

#### **EDUCATION**

**1996** Graduated medical doctor, Medical University of Hanoi

**1996 - 2001** Resident doctor in Neurosurgery, Medical University of Hanoi

**From 2001:** Faculty, Department of Surgery, Medical University of Hanoi

**2005 - 2010** PhD in Neurosurgery, assistant professor in neurosurgery

**2014 – now** Associate Professor, Hanoi Medical University

**2019 - 2021** (2 years) General Secretary of ACNS

**2022 - now** General Secretary of VNS

## MEMBER OF ACADEMIC SOCIETIES

1. General Secretary of Vietnamese Neurosurgical Society
  2. Member of Asian Neurosurgery Society (ACNS)
  3. Member of CNS (Congress of Neurosurgery Society, USA)
  4. Member of NASS (North American Spine Society)
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**KARIN DISERENS**  
**SWITZERLAND**

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## SUMMARY DESCRIPTION OF THE MAIN CLINICAL ACTIVITY AND RESEARCH

Specialist in neurology, physical medicine and rehabilitation. Co-creator of the Swiss Society for Neurology and was head of the post-acute neuro-rehabilitation clinics (1996-2005), before leading a mobile neuro-rehabilitation team at the University Hospital (2006-2009) and becoming head of the Acute Neuro-rehabilitation Unit of the Neurology service (NRA), in the Department of Clinical Neurosciences, Lausanne University Hospital. After contributing to quality criteria for acute and post-acute neurorehabilitation in Switzerland, her 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 on rehabilitation potential. Cognitive approaches to creation and emotion are a central focus of the research of the Acute Neurorehabilitation (ANR) Unit. The integrated clinical research in the very acute phase allows developing clinical and multimodal evaluation of behavioral phenotyping and neurosensorial treatment after brain injury with disorders of consciousness inside and during outdoor therapy.

Teaching at the University of Lausanne, Switzerland has included integrating a specific teaching program in the domain of acute neurorehabilitation for pre-graduate and post-graduate training of medical students as well as interdisciplinary professionals. Cognitive behavioral neurology has also been created as a new discipline.

## MAIN ASSOCIATION MEMBERSHIPS:

President of the Swiss Society of Cognitive and Behavioral Neurology (SSCBN)  
Member of the committee of the European Federation of Neurorehabilitation Societies  
Co-chair, Module 3.0 “Behavioral Phenotyping in DOC”, of the Curing Coma Campaign Coma Science Working Group (CSWG), Neurocritical Care Society  
Co-chair, World Federation of Neurology, Special Interest Group of Early Mobilisation  
Member, European Academy of Neurology Scientific Panel of Neurorehabilitation  
Member, European Academy of Neurology Scientific Coma Panel

## PUBLICATIONS

### Original research papers and reviews

1. Jöhr J, Martinez T, Marquis R., Bruce S., Binz P.A., Rey S., Hafner G., Attwell C., Diserens K., (2023/09). Measuring Salivary Cortisol to Assess the Effect of Natural Environments on Stress Level in Acute Patients With Severe Brain Injuries: An Exploratory Study. *Cureus*, 15 (9) pp. e44878. Peer-reviewed. [URN][DOI][WoS][Pmid][serval:BIB\_6BDDC23F6BE9]
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4. La Framboise N. F., Rochat E., & Karin Diserens (2023). A Biopsychosocial Evaluation of Post-Acute Outcome of Patients with Severe Brain Lesions Recovering from Coma: An Exploratory Study. *J. Clin. Med.*, 12, 3572. <https://doi.org/10.3390/jcm12103572>
5. Diserens K., Meyer I.A., Jöhr J., Pincherle A., Dunet V., Pozeg P., Rylvlin P., Muresanu D.F., Stevens R.D., & Schiff N.D. (2023). A Focus on Subtle Signs and Motor Behavior to Unveil Awareness in Unresponsive Brain-Impaired Patients: The Importance of Being Clinical. *Neurology*, 100 (24) pp. 1144-1150. DOI:<https://doi.org/10.1212/WNL.000000000207067>
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9. Jöhr J., Aureli, V., Meyer, I., Cossu, G. & Diserens, K. (2022). Clinical Cognitive Motor Dissociation: A Case Report Showing How Pitfalls Can Hinder Early Clinical Detection of Awareness. *Brain Sci.*, 12(2), 157; <https://doi.org/10.3390/brainsci12020157>.
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41. Mézier, H., Zambelli, PY, Bonnard, C., Raffoul, W., Vuadens, P. & Diserens, K. (2016). Retrospective Analysis of Goal Assessment for Conservative Treatment and Surgical Intervention for Spasticity of Upper and Lower Limbs in an Interdisciplinary Neuro-Orthopedic Spasticity Clinic. *International Journal of Physical Medicine and Rehabilitation*, 4 (3), 343. doi: 10.4172/2329-9096.1000343.
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## Book chapters

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#### MEMBERSHIPS TO SCIENTIFIC ORGANIZATIONS

1. World Sleep Society, Member, 2011-2014
2. Turkish Sleep Medicine Association, Member, 2011
3. Turkish Parkinson Association, Member, 2010
4. Turkish Neurology Association, Member, 1992
5. Turkish Medical Association, Member, 1992

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2. ÖZİÇ MUHAMMET ÜSAME, ÖZBAY YÜKSEL, EKMEKÇİ AHMET HAKAN (2015). Çoklu Değişken Kullanarak YSA ile Demans Sınıflandırılması. / Classification of dementia with ANN using multiple variable.. 2015 23rd Signal Processing and Communications Applications Conference (SIU), Doi: 10.1109/SIU.2015.7130311, (Tam metin bildirir), (Kontrol No: 4334130)
3. ÖZMEN GÜZİN, EKMEKÇİ AHMET HAKAN, YILMAZ BURAK (2017). Comparison of Different Classification Methods Using Autoregressive Estimation for Cervical Muscles Based sEMG Signals. *International Conference on Engineering Technologies (ICENTE 17)*, 292-295., (Tam metin bildirir), (Kontrol No: 4870302)
4. ÖZİÇ MUHAMMET ÜSAME, ÖZŞEN SERAL, EKMEKÇİ AHMET HAKAN (2017). A Novel Feature Extraction Approach with VBM 3D ROI Masks on MRI. *International Conference on Medical and Biological Engineering*, 523(530), Doi: 10.1007/978-981-10-4166-2, (Tam metin bildirir), (Kontrol No: 4870239)
5. ÖZİÇ MUHAMMET ÜSAME, ÖZŞEN SERAL, EKMEKÇİ AHMET HAKAN (2017). MR Görüntülerinde Voxel Tabanlı Morfometrik Analiz. / Voxel Based Morphometric Analysis on MR Images.. *International Artificial Intelligence and Data Processing Symposium*, (Tam metin bildirir), (Kontrol No: 4870313)
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7. TORKAMANI AZAR MASTANEH, EKMEKÇİ AHMET HAKAN, KAPTAN HÜLAGÜ, OKATAN ALİ (2013). Comparison of spectral changes in EEG recordings of an epileptic patient before and after the vagal nerve stimulator implantatio.. *SiNAPSA Neuroscience Conference 'xx13 (SNC'xx13)*, (Özet bildirir), (Kontrol No: 4334060)
8. EKMEKÇİ AHMET HAKAN, TORKAMANI AZAR MASTANEH, KAPTAN HÜLAGÜ, ÖZTÜRK ŞEREFNUR (2015). Detection of Significant Spectral and Spatial Variations in Independent Components of Pre- and Post-VNS EEG Data: A Group Case Study.. 67th Annual Meeting of the American Academy of Neurology, (Özet bildirir), (Kontrol No: 4974023)

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- Epilepsi 100 Temel Madde (2001)., EKMEKÇİ AHMET HAKAN, ÇALIYURT OKAN, Nobel Tıp Kitabevleri, Editör:Ahmet Hakan EKMEKÇİ, Basım sayısı:1, Sayfa Sayısı 211, ISBN:9799754200514, Türkçe(Kitap Tercümesi), (Kontrol No: 4332164)

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- ÖZDEMİR GÖKHAN, KIZILDAĞ NAZİM, EKMEKÇİ AHMET HAKAN, GÜMÜŞ HALUK, AYGÜL RECEP, ÖZTÜRK ŞEREFNUR (2018). Üçüncü Basamak Bir Nöroloji Kliniğinin Karotis Arter Stentlemesi Deneyiminin Retrospektif Değerlendirilmesi. / Retrospective Evaluation of Carotid Artery Stenting Experience of a Third Stage Neurology Clinic.. Turkish Journal of Cerebrovascular Diseases, 24(1), 14-18., Doi: 10.5505/tbdhd.2018.95867, (Kontrol No: 4326033)
- YILDIZ MUSTAFA, YAZICI AYLAL, ÜNAL SÜHEYLAL, AKER TAMER, ÖZGEN GÜLİZ, EKMEKÇİ AHMET HAKAN, DUY BAKİ, TORUN FUAT, ÜNSAL GÜL, COŞKUN CENK SİBEL, SİPAHİ BİRSEN, ÇAKIL GÖNÜL, ERYILDIZ MEDİNE (2002). Şizofreninin Ruhsal-Toplumsal Tedavisinde Sosyal Beceri Eğitimi -- Belirtilerle Başetme ve İlaç Tedavisi Yaklaşımının Türkiye'xsde Çok Merkezli Bir Uygulaması. / Social skills education in psycho-social treatment of schizophrenia.. Turkish Journal of Psychiatry, 13(1), 41-47., (Kontrol No: 4332874)
- YILDIZ MUSTAFA, BOZTEPE VAHAP, EKMEKÇİ AHMET HAKAN, BEREKETOĞLU MEHMET ALİ, ÖZBEY BEDİ (1997). Psikiyatri Dışı Hekimlerin Psikotrop İlaç Kullanımları : Bir Ön Çalışma.. Journal of Turgut Ozal Medical Center, 4(1), 76-79., (Kontrol No: 4868132)
- YILMAZ HİKMET, MÜFTÜOĞLU NEYAL MÜNİFE, ÖZCAN CEMAL, İLHAN ATİLLA, EKMEKÇİ AHMET HAKAN (1997). Migren Başağrısında Sempatik Deri Yanıtı. / Sympathetic skin responses in migraine headache.. Journal of Turgut Ozal Medical Center, 4(3), 285-290., (Kontrol No: 4332865)

## PAPERS PRESENTED AT NATIONAL SCIENTIFIC MEETINGS AND PUBLISHED IN PROCEEDINGS BOOKS:

- EKMEKÇİ AHMET HAKAN, ÖZTÜRK ŞEREFNUR, KAPLAN ESRA (2011). Multipl Sklerozlu Hastalarda Trigeminal Somatosensoryal Uyanılmış Potansiyeller. 27. Ulusal Klinik Nörofizyoloji Kongresi, (Kontrol No: 4884781)
- EKMEKÇİ AHMET HAKAN, MÜFTÜOĞLU MÜNİFE, BÖLÜK AYHAN, ÖZCAN ABDULCEMAL, YILMAZ HİKMET, ERTÜRK ÖZCAN (1994). Do We Underestimate Electroencephalography?. 3rd Mediterranean Epilepsy Conference, (Kontrol No: 4870054)
- ÖZMEN GÜZİN, ÖZBAY YÜKSEL, EKMEKÇİ AHMET HAKAN (2014). EMG Sinyallerinde Kas Yorgunluğunun YSA ile Sınıflandırılması.. Tıp Teknolojileri Ulusal Kongresi (TIPTEKNO 14 ), (Kontrol No: 4334090)
- ÖZİÇ MUHAMMET ÜSAME, ÖZBAY YÜKSEL, EKMEKÇİ AHMET HAKAN (2014). Beyin MR Görüntülerinde Alzheimer Hastalığının Özniteliklerinin Çıkarılması. / Extraction of Features of Alzheimer Diseases on Brain MR Images.. Tıp Teknolojileri Ulusal Kongresi (TIPTEKNO 14 ), 38- 41., (Kontrol No: 4870326)
- EKMEKÇİ AHMET HAKAN (2014). Olgularla Demansta Malnutrisyon Tedavisi.. 7. Akademik Geriatri Kongresi 2014, (Kontrol No: 4885011)

- EKMEKÇİ AHMET HAKAN, AKINCI ÖZLEM, DEMİR ABDULLAH, ÖZTÜRK ŞEREFNUR (2012). Çocukluk Çağı Çene Yapısı Bozukluğunun Giderilmesinin Uyku Kalitesi Üzerine Etkisi.. 48. Ulusal Nöroloji Kongresi, (Kontrol No: 4887511)
- ÖZAKBAŞ SERKAN, İDİMAN EGEMEN, SİVA AKSEL, SAİP SABAHATTİN, ALTINTAŞ AYŞE, KARABUDAK RANA, TUNCER KURNE ASLI, YÜCEYAR AYŞE NUR, EKMEKÇİ ÖZGÜL, TURAN ÖMER FARUK, HANOĞLU TAŞKAPLIOĞLU ÖZLEM, TERZİ MURAT, TAMAM YUSUF, TAŞDEMİR NEBAHAT, PETEK BALCI BELGİN, SOYSAL AYSUN, KALE İÇEN NİLÜFER, ZORLU YAŞAR, TİFTİKÇİOĞLU BEDİLE İREM, IŞIK NİHAL, EFENDİ HÜSNÜ, BOZ CAVİT, CANBAZ KABAY SİBEL, AKMAN DEMİR GÜLŞEN, GEDİZLİOĞLU MUHTEŞEM, KIYLIOĞLU NEFATİ, TOMBUL TEMEL, GÖKGÜL ALPER, YANDIM KUŞÇU DEMET, MAVİOĞLU HAÇİCE, ÇELEBİ ARİF, MİRZA MERAL, TOĞROL RİFAT ERDEM, KOÇER EMİNE BELGİN, ALP RECEP, YAYLA VİLDAN AYŞE, ÖZTÜRK ŞEREFNUR, EKMEKÇİ AHMET HAKAN, SELEKER FERAY, AYDIN GÜNGÖR HÜLYA, YÜCESAN CANAN, GENÇER GENÇ, BİLGİÇ ADNAN BURAK, TAN MELİHA (2013). Multipl Skleroz Hastalığı Tam Süreci Klinik ve Radyolojik Bulgular ile Yardımcı İncelemelerin Yeri.. 49. Ulusal Nöroloji Kongresi, (Kontrol No: 4887623)

### OTHER PUBLICATIONS:

- MAKALE Özgün Makale : EKMEKÇİ AHMET HAKAN (2016). Demansta Malnütrisyon Tedavisi.. Actua Medicine, 24(5), 37-42.(Özgün Makale), (Kontrol No: 4890023))

### PROJECTS:

- TICH-2, Diğer (Uluslararası), Yürütücü:ÖZTÜRK ŞEREFNUR, Araştırmacı:EKMEKÇİ AHMET HAKAN, , 01/03/2001 - 30/09/2013
- ENOS, Diğer (Uluslararası), Yürütücü:ÖZTÜRK ŞEREFNUR, Araştırmacı:EKMEKÇİ AHMET HAKAN, 01/04/2001 - 31/03/2013
- Behcet's disease as a causative factor of cerebral venous sinus thrombosis: subgroup analysis of data from the VENOST study. , ARAŞTIRMA PROJESİ, Yürütücü:ÖZTÜRK ŞEREFNUR, Araştırmacı:EKMEKÇİ AHMET HAKAN, , 01/06/2001 - 01/06/2013
- Late Onset Pompe Disease National Registry Study., ARAŞTIRMA PROJESİ, Yürütücü:SERDAROĞLU OFLAZER PIRAYE, Araştırmacı:EKMEKÇİ AHMET HAKAN, 05/09/2012 - 31/12/2014

### AWARDS:

- Best E-Poster Award, CONY, GERMANY, 2014
- Oral Presentation Third Prize, Medical Technologies National Congress, 2014
- Research Article Second Prize, Turkish Neurology Association, 2016

### POSTGRADUATE THESIS CONSULTANCY

- Comparison of sleep rem period disorders and atony in patients with sleep disorders, Parkinson's disease, Parkinson's plus syndrome and non-Parkinson's sleep apnea, ESRA KAPLAN REÇBER, (2013). Selçuk University, No: 359386
- Comparison of serum cytokine levels during attack and remission periods in multiple sclerosis patients and their relationship with the disability scale (EDSS), ASLIHAN GEZER, (2016). Selçuk University, No: 447176
- The relationship between tryptophan metabolites and type and severity of disease in multiple sclerosis, ŞAZIYE MELİKE IŞIK (2020). Selçuk University, No: 680668





**DOMINIK FORTNER**  
**AUSTRIA**

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**CONTACT DETAILS**

**Date of Birth:** February 1st, 1995

**Citizenship:** Austria

**EDUCATION**

**2013-2019:** Medical Studies at Medical University of Vienna

**EXPERIENCE**

**03/2020- 04/2021:** Basic Training at Klinik Floridsdorf (Vienna) and Klinik Landstraße (Vienna)

**09/2020:** Residency in Neurology at Klinik Hirslanden (Zurich)

**06/2021-12/2021:** Residency in General Medicine at Klinik Floridsdorf

**01/2022-today:** Residency in Neurology at Klinik Floridsdorf

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**THOMAS HAMP**  
**AUSTRIA**

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**PERSONAL INFORMATION**

**Date of birth:** February 14, 1982 in Vienna, Austria

**Nationality:** Austria

**LANGUAGES**

German, English

**ACADEMIC AND PROFESSIONAL CAREER**

**Doctor of Medicine**

Medical University of Vienna

**Specialist training**

- Medical University of Vienna, Vienna General Hospital, 2007–present



- Specialist in Anaesthesia and Intensive Care Medicine since September 2014

### **Fellowship in Critical Care Echocardiography**

St. Vincent's and St. George Hospital Sydney, Australia, January 2016-February 2017

### **Consultant in Anaesthesia and Intensive Care Medicine**

Medical University of Vienna 2020-2023

- Executive Head of Prehospital Emergency Medicine since 2018-2021
- Head of Medical Staff Office of the Department since 2019-2021
- Executive Head of the Intensive Care Unit for major burns 13i1, 2021-2022
- Head of the Department for Obstetric Anaesthesia, 2022-2023

### **Emergency Physician Helicopter Emergency Medical Service**

Martin Flugrettung, Austria 2020 - ongoing

### **“Venia docendi” in Anesthesia and Intensive Care Medicine**

Medical University of Vienna, 2021

### **Austrian court expert in Anesthesia, Intensive Care Medicine and Emergency Medicine**

Regional court for civil matters Vienna, 2021-ongoing

### **Consultant in Prehospital Emergency Medicine**

Emergency Medical Service Vienna, Austria 2023-ongoing

### **ADDITIONAL MEDICAL QUALIFICATIONS**

#### **European Diploma in Intensive Care Medicine, EDIC**

European Society of Intensive Care Medicine, 2014

#### **Austrian Diploma in Emergency Medicine**

Austrian Medical Association, 2017

#### **European Diploma in Transthoracic Echocardiography**

European Association of Cardiovascular Imaging, 2018

#### **Austrian Diploma in Perioperative Echocardiography**

Austrian Association of Anaesthesia, 2018

#### **Austrian Diploma in transthoracic Echocardiography**

Austrian Association of Cardiology, 2018

#### **European Diploma in Advanced Critical Care Echocardiography, EDEC**

European Society of Intensive Care Medicine, 2018

#### **Austrian Diploma of Chief Emergency Physician**

Austrian Medical Association, 2023

## PUBLICATIONS

1. Fridrich P, Colvin HP, Zizza A, Wasan AD, Lukanich J, Lirk P, Saria A, Zernig G, Hamp T, Gerner P. Phase 1A safety assessment of intravenous amitriptyline. *J Pain* 2007 Jul;8(7):549-5.
2. Hamp T, Fridrich P, Mauritz W, Hamid L, Pelinka LE. Cholecystitis after trauma. *J Trauma* 2009 Feb;66(2):400-6.
3. Hamp T, Krammel M, Weber U, Schmid R, Graf A, Plöchl W. The effect of a bolus dose of intravenous lidocaine on the minimum alveolar concentration of sevoflurane: a prospective, randomized, double-blinded, placebo-controlled trial. *Anesth Analg*. 2013 Aug;117(2):323-8.
4. Weber U, Krammel M, Linke S, Hamp T, Stimpfl T, Reiter B, Plöchl W. Intravenous lidocaine increases the depth of anaesthesia of propofol for skin incision - a randomised controlled trial. *Acta Anaesthesiol Scand*. 2015 Jan 13.
5. Motal MC, Klaus DA, Leberherz-Eichinger D, Tudor B, Hamp T, Wiegeler M, Seemann R, Krenn CG, Roth GA. Increased plasma vaspin concentration in patients with sepsis: an exploratory examination. *Biochem Med (Zagreb)*. 2015;25(1):90-6.
6. Hamp T, Stumpner T, Grubhofer G, Ruetzler K, Thell R, Hager H. Haemodynamic response at double lumen bronchial tube placement - Airtraq vs. MacIntosh laryngoscope, a randomised controlled trial. *Heart Lung Vessel*. 2015;7(1):54-63.
7. Hamp T, Mairweck M, Schiefer J, Krammel M, Pablik E, Wolzt M, Plöchl W. Feasibility of a reversed isolated forearm technique by regional antagonization of rocuronium-induced neuromuscular block: a pilot study. *Br J Anaesth*. 2016 Jun;116(6):797-803.
8. Baron-Stefaniak J, Götz V, Allhutter A, Schiefer J, Hamp T, Faybik P, Berlakovich G, Baron DM, Plöchl W. Patients Undergoing Orthotopic Liver Transplantation Require Lower Concentrations of the Volatile Anesthetic Sevoflurane. *Anesth Analg*. 2017 Sep;125(3):783-789.
9. Breeding J, Iyer A, Nair P, Grealy R, Hamp T, Kawanishi Y. Effects of ECMO pump flow, backflow cannulae, mean arterial blood pressure (MAP), and pulse pressure (PP) on Doppler derived flow velocities of the lower limbs in patients on peripheral VA ECMO: a pilot study. *Aust Crit Care*. 2018 May 29. pii: S1036-7314(18)30010-9. doi: 10.1016/j.aucc.2018.04.002.
10. Krammel M, Schnaubelt S, Weidenauer D, Winnisch M, Steininger M, Eichelner J, Hamp T, van Tulder R, Sulzgruber P. Gender and age-specific aspects of awareness and knowledge in basic life support. *PLoS One*. 2018 Jun 12;13(6):e0198918
11. Weidenauer D, Hamp T, Schriefl C, Holaubek C, Gattinger M, Krammel M, Winnisch M, Weidenauer A, Mundtlinger G, Lang I, Schreiber W, Sterz F, Herkner H, Domanovits H. The impact of cardiopulmonary resuscitation (CPR) manikin chest stiffness on motivation and CPR performance measures in children undergoing CPR training-A prospective, randomized, single-blind, controlled trial. *PLoS One*. 2018 Aug 16;13(8):e0202430. doi: 10.1371/journal.pone.0202430. eCollection 2018.
12. Hamp T, Baron-Stefaniak J, Krammel M, Reiter B, Langauer A, Stimpfl T, Plöchl W. The effect of intravenous s-ketamine on the MAC of sevoflurane: A randomized, placebo-controlled, double-blinded clinical trial. *Br J Anaesth*, accepted August 2018
13. Wiegeler M, Hamp T, Gratz J, Pablik E, Schaden E. Comparison of ROTEM parameters from venous and intraosseous blood. *Scientific Reports*, accepted January 2019
14. Yastrebov K, Aneman A, Schulz L, Hamp T, McCanny P, Parkin G, Myburgh J. Comparison of echocardiographic and invasive measures of volaemia and cardiac performance in critically ill patients. *Scientific Reports*, accepted March 2020
15. Krammel M, Lobmeyr E, Sulzgruber P, Winnisch M, Weidenauer D, Poppe M, Datler P, Zeiner S, Keferboeck M, Eichelner J, Hamp T, Uray T, Schnaubelt S, Nuernberger A. The impact of a high-quality basic life support police-based first responder system on outcome after out-of-hospital cardiac arrest. *PLoS One*. 2020 Jun 2;15(6):e0233966. doi: 10.1371/journal.pone.0233966. eCollection 2020.
16. Müller J, Plöchl W, Reiter B, Stimpfl T, Graf A, Baron-Stefaniak J, Infanger L, Hamp T. The effect of oral  $\Delta$ -9-tetrahydrocannabinol on the minimal alveolar concentration of sevoflurane: A randomised, controlled, observer-blinded experimental study. *Eur J Anaesthesiol* 2020 doi:10.1097/EJA.0000000000001295.
17. Hamp T, Prager G, Baron-Stefaniak J, Mueller J, Bichler C, Plöchl W. Duration of safe apnea in morbidly obese patients during passive oxygenation using high-flow nasal insufflation versus regular flow nasal insufflation, a randomized trial. *Surg Obes Relat Dis* 2020; Sep 23;S1550-7289(20)30557-8.
18. Hermann M, Hafner C, Scharner V, Hribersek M, Maleczek M, Schmid A, Schaden E, Willschke H, Hamp T. Remote real-time supervision of prehospital point-of-care ultrasound: a feasibility study. *Scand J Trauma Resusc Emerg Med*. 2022 Mar 24;30(1):23. doi: 10.1186/s13049-021-00985-0. PMID: 35331304; PMCID: PMC8944068.
19. Maleczek M, Schebesta K, Hamp T, Burger AL, Pezawas T, Krammel M, Roessler B. ST-T segment changes in prehospital emergency physicians in the field: a prospective observational trial. *Scand J Trauma Resusc Emerg Med*. 2022 Jul 15;30(1):47. doi: 10.1186/s13049-022-01033-1. PMID: 35841049; PMCID: PMC9288087.
20. Krammel M, Drahohs V, Hamp T, Lemoyne S, Grassmann D, Schreiber W, Sulzgruber P, Schnaubelt S. The Epidemiology of Pre-Hospital EMS Treatment of Geriatric Patients in the City of Vienna-An Overview. *J Clin Med*. 2023 Jan 13;12(2):643. doi: 10.3390/jcm12020643. PMID: 36675572; PMCID: PMC9865411.
21. Ulbing S, Infanger L, Fleischmann E, Prager G, Hamp T. The Performance of Opioid-Free Anesthesia for Bariatric Surgery in Clinical Practice. *Obes Surg*. 2023 Jun;33(6):1687-1693. doi: 10.1007/s11695-023-06584-5. Epub 2023 Apr 27. PMID: 37106268; PMCID: PMC10234923.

22. Hafner C, Scharner V, Hermann M, Metelka P, Hurch B, Klaus DA, Schaubmayr W, Wagner M, Gleiss A, Willschke H, Hamp T. Eye-tracking during simulation-based echocardiography: a feasibility study. *BMC Med Educ.* 2023 Jul 1;23(1):490. doi: 10.1186/s12909-023-04458-z. PMID: 37393288; PMCID: PMC10314389.
23. Hamp T, D'souza R, Gopalakrishnan M, Yastrebov K. Mediastinal hematoma as a rare life threatening complication of thrombolysis for pulmonary embolism detected by transthoracic echocardiography. *CASE*, accepted <https://doi.org/10.1016/j.case.2017.12.002>
24. Hamp T, Weidenauer D. (Hrsg.) *Lehrbuch Tertiäre Notfall- und Intensivmedizin.* ISBN-10:3709110130, 1st and 2nd Edition, Springer Wien-New York, 2012.
25. Kandioler et al. *Erste Hilfe - Ein Lehrbuch für Pflege und Gesundheitsberufe.* ISBN-10: 3708906764, 1st Edition, Facultas Universitätsverlag, 2011.

## **AWARDS AND FUND RAISING**

### **„Young Teacher Award, Förderpreis des MFT Medizinischen Fakultätentages“**

Verliehen vom Medizinischen Fakultätentag der Bundesrepublik Deutschland, 2014

### **“Contract on Medical Institution´s Training on surgical techniques in the field of metabolic surgery”**

Covidien AG, a Medtronic company (Number A 1497327, A 1534363)

### **“Research Award, 3rd Place”** by the Austrian Association of Anaesthetists (Österreichische Gesellschaft für Anästhesiologie, Reanimation und Intensivmedizin, ÖGARI

### **“Research grant from the Medical Scientific Fund of the Mayor of the City of Vienna”**

(ref. 21135) for the project “Feasibility of transoesophageal echocardiography in out of hospital cardiac arrest”.

## **MEMBERSHIPS**

- European Society of Intensive Care Medicine, ESICM, National representative, Austria
- European Society of Anaesthesiology and Intensive Care, ESAIC
- Austrian Association of Anaesthetists (Österreichische Gesellschaft für Anästhesiologie, Reanimation und Intensivmedizin, ÖGARI)
- American Society of Echocardiography, ASE
- Austrian Association of Ultrasound in Medicine (Österreichische Gesellschaft für Ultraschall in der Medizin), Executive head, Section of perioperative Sonography since 2018



## GÜNTHER HERZER

### AUSTRIA

#### PERSONAL INFORMATION

**Address:** Department of Anesthesiology, Emergency and Critical Care Medicine  
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**Telephone:** (0043) (0) 2622 9004-12001

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#### EDUCATION AND WORK EXPERIENCE

**2017 – 2022** Head of neurointensive care unit, General Hospital Wiener Neustadt

**2013 – 2017** Deputy head of neurointensive care unit, General Hospital Wiener Neustadt

**2012 – 2014** University course Healthcare Management, Master of Science, University for Continuing Education Krems

**2010 – 2011** University course Hospital Management, University for Continuing Education Krems

**since 2009** Senior physician of Department of Anesthesiology, Emergency and Critical Care Medicine, General Hospital Wiener Neustadt

**2004 – 2009** Training as a specialist in anesthesia and intensive care medicine, General Hospital Wiener Neustadt

**2006 - 2010** Emergency physician at Helicopter EMS, Wiener Neustadt

**2003 - 2010** Emergency physician at ground-based EMS Wiener Neustadt

**2003 – 2004** Secondary doctor, Department of Anesthesiology, Emergency and Critical Care Medicine, General Hospital Wiener Neustadt

**2000 – 2003** Training General Practitioner, Styria Steiermärkische Krankenanstaltengesellschaft

**1999 - 2000** Community Service, Austrian Red Cross

**1992 - 1999** Medical studies, University of Vienna

#### SCIENTIFIC WORK

1. Weninger P, Trimmel H, Herzer G, Nau T, Aldrian S, Vecsei V Prähospitaler Traumaversorgung. Notfall&Rettungsmedizin vol.8, issue 3, Mai 2005, p. 171-181
2. [Neuroanaesthesia. Principles of optimized perioperative management]. Herzer G, Trimmel H. Anaesthesist. 2010 Apr;59(4):371-82; quiz 383-4. doi: 10.1007/s00101-010-1708-8. PMID: 20336264 Review. German
3. Factors that may improve outcomes of early traumatic brain injury care: prospective multicenter study in Austria. Brazinova A, Majdan M, Leitgeb J, Trimmel H, Mauritz W; Austrian Working Group on Improvement of Early TBI Care. Scand J Trauma Resusc Emerg Med. 2015 Jul 16;23:53. doi: 10.1186/s13049-015-0133-z.
4. Current practice in neurocritical care of patients with subarachnoid haemorrhage and severe traumatic brain injury : Results of the Austrian Neurosurvey Study. Herzer G, Illievich U, Voelckel WG, Trimmel H. Wien Klin Wochenschr. 2016 Sep;128(17-18):649-57. doi: 10.1007/s00508-016-1027-4. Epub 2016 Jul 12
5. [Intensive care treatment of traumatic brain injury in multiple trauma patients : Decision making for complex pathophysiology]. Trimmel H, Herzer G, Schöchl H, Voelckel WG. Unfallchirurg. 2017 Sep;120(9):739-744. doi: 10.1007/s00113-017-0344-z
7. Analgosedation of adult patients with elevated intracranial pressure : Survey of current clinical practice in Austria. Herzer G,

- Mirth C, Illievich UM, Voelckel WG, Trimmel H. Wien Klin Wochenschr. 2018 Jan;130(1-2):45-53. doi: 10.1007/s00508-017-1228-5. Epub 2017 Jul 21
8. Citicoline in severe traumatic brain injury: indications for improved outcome : A retrospective matched pair analysis from 14 Austrian trauma centers. Trimmel H, Majdan M, Wodak A, Herzer G, Csomor D, Brazinova A. Wien Klin Wochenschr. 2018 Jan;130(1-2):37-44. doi: 10.1007/s00508-017-1240-9. Epub 2017 Jul 27.
  9. A novel pharmacological treatment concept for neuroprotection in severe traumatic brain injury-Two case reports. Trimmel H, Herzer G, Derdak C, Kettenbach J, Grgac I. Clin Case Rep. 2022 Nov 20;10(11):e6626. doi: 10.1002/ccr3.6626. eCollection 2022 Nov.
  10. Herzer G, Illievich U, Trimmel H Stand der neurointensivmedizinischen Versorgung von Patienten mit aneurysmatischer Subarachnoidalblutung in Österreich. Austrian Neurointensive Survey Posterpresentation Austrian International Congress 2013
  11. Herzer G, Illievich U, Trimmel H Stand der neurointensivmedizinischen Versorgung von Patienten mit schwerem Schädelhirntrauma in Österreich. Austrian Neurointensive Survey Posterpresentation Austrian International Congress 2013
  12. SyNAPSE® Trial: A randomized, double-blind, placebo-controlled phase 3 study to investigate the efficacy and safety of progesterone in patients with severe traumatic brain injury. Subinvestigator

Member of Arbeitsgruppe Neuroanästhesie der Österr. Gesellschaft für Anesthesiologie, Reanimation und Intensivmedizin (ÖGARI)

Member of Arbeitsgruppe zur Optimierung der Erstversorgung von Patienten mit SHT  
Empfehlungen zur Erstversorgung von Patienten mit Schädel-Hirn-Trauma. [www.igeh.org](http://www.igeh.org)

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**VOLKER HÖMBERG**  
**GERMANY**

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#### PERSONAL DATA

**Born** 25 July 1954

**Phone:** 0049 172 9226529

**Email:** [Mueller-hoemberg@t-online.de](mailto:Mueller-hoemberg@t-online.de)

#### MEDICAL CAREER

**1973 - 1980** Medical School, Universities of Düsseldorf and Freiburg; Electives in Neurology at Boston City Hospital, Boston, Mass.; National Hospital for Nervous Diseases, London

**1975-1980** Junior researcher in the Department of Neuropsychology at the C. & O. Vogt Institute for Brain Research, Düsseldorf and the Department of Neurology, Freiburg (Prof. R. Jung)

**1980 - 1981** Research fellow in the Department of Neuropsychology (Prof. G. Grünewald) at the C. & O. Vogt Institute for Brain Research, Düsseldorf

**1981-1986** Clinical training in the Department of Neurology (Prof. H.-J. Freund), Heinrich-Heine-University Düsseldorf

**since 1985** Senior registrar in the Department of Neurology, Heinrich-Heine-University

Düsseldorf

**1987-1996** Senior investigator for the German Research Council Special Task Force in Neurology at Heinrich-Heine-University (SFB 200 and SFB 194)

**1987-2005** Medical director of the Neurological Therapy Center (NTC), Heinrich-Heine-University Düsseldorf

**Since 1988** Board examiner for Neurology at the local examination board (Ärzttekammer Nordrhein)

**1989-1997** Co-Founder and Vice president of the German Society for Neurological Rehabilitation

**1993** Habilitation in Neurology, Heinrich-Heine-University Düsseldorf

**Since 1995** Board examiner for physical medicine and rehabilitation (Ärzttekammer Nordrhein)

**1997-2005** Medical director of the Neurological Therapy Center, Cologne

**1998-2004** President of the German Society for Neurological Rehabilitation

**2000 to 2010** Medical director and head of Neurology, St. Mauritius Therapy Hospital, Meerbusch

**From 10/2011 to Sept 2022** Head of Neurology and Medical Director, SRH Gesundheitszentrum Bad Wimpfen

**Since 2003** Secretary General World Federation for NeuroRehabilitation (WFNR)

**10/2004 to 12/2010** Vice president of the German Society for Neurological Rehabilitation

**2005 to 2010** Panel-Chairman Neurorehabilitation for European Federation Neurological Societies (EFNS)

**Since 12/2010** Member of the board (DGNR)

**Since 2011** Secretary General European Federation of Neurorehabilitation (EFNR)

**Since 2016** Vice President European Federation of Neurorehabilitation (EFNR)

**Since 2017** Honorary doctorate University of Medicine and Pharmacy Iuliu Hatieganu Cluj-Napoca Romania

**Since 11/2020** President Elect World Federation for Neurorehabilitation

**Since 12/2022** President World Federation for Neurorehabilitation

## HEALTH POLITICS

Board Member Bundesverband Neurorehabilitation (Federal organisation for Neurorehabilitation) until 2022

## AREAS OF SCIENTIFIC INTEREST

- Motor control
- Neuropsychology,
- Brain plasticity
- Epistemology of rehabilitation sciences
- Pharmacology in neurorehabilitation
- Rehabilitation services concept formation

## SPECIAL HONORS

- Honorary member Japanese Society of Physical medicine and Rehabilitation
- Honorary member Romanian Society of Neurology
- Honorary member German Society of Neurotraumatology and Neurorehab
- Neurorehabilitation Award German Society of Neurology and German Society of Neurorehabilitation

## **PUBLICATIONS**

more than 200 original articles in peer reviewed journals (see publication list)

## **JOURNAL CO EDITOR**

Journal of Neural Repair

## **JOURNAL REFEREE**

- BRAIN
- Cerebrovascular disease
- Annals of Neurology
- Neurology
- Archives of Neurology
- Neurologie und Rehabilitation

## **CONGRESS ORGANISATION**

- Annual meetings Deutsche Gesellschaft für Neurorehabilitation DGNR
- World Congresses on Neurorehabilitation WCNR):
- HongKong (2006)
- Brasilia (2008)
- Vienna (2010)
- Melbourne ( 2012)
- Istanbul (2014)
- Philadelphia 2016
- Mumbai 2018
- Lyon 2020
- Vienna 202
- Vancouver 2024
- European Congresses of Neurorehabilitation (ECNR)
- Merano 2011
- Bucarest 2013
- Vienna 2015
- Lausanne 2017
- Budapest 2019
- Digital 2021
- Lyon 2023
- Controversies in Neurology (annually since 2011)
- Programme chairman AMN i.e. Academia Multidisciplinaria Neurotraumatologica

## CONCEPT FORMATION /START UP MANAGEMENT

- Neurological Therapy Center at University Duesseldorf (1986/87)
- Neurological Rehab Center Magdeburg (first in east Germany after reunification)1990
- Neurological Therapy Center Hamburg (for MEDIAN group) 1994
- Neurological Therapy Hospital Hilchenbach 1995 (for AHG group)
- Neurological Therapy Center Cologne 1996/1997
- Neurological Rehabilitation Hospital Magdeburg 1996 (for MEDIAN group)
- St Mauritius Therapy Hospital Meerbusch 1998-2001 (for VKKD group)
- Dept.Neurology Health Center Bad Wimpfen and senior consultant for the SRH group (frmo 2011 to 2022)

## FURTHER MANAGEMENT EXP.

- CEO Neurological Therapy Center at Heinrich Heine University (1987-2005)
- CEO Neurological Therapy Center Cologne (1997-2005)
- CEO St. Mauritius Therapy Hospital Meerbusch 1998-2001
- Member of the board (Aufsichtsrat) Bank im Bistum Essen(2002-2010)



**ARTHUR HOSMANN**  
**AUSTRIA**

## PERSONAL INFORMATION

Department of Neurosurgery  
Medical University of Vienna  
Spitalgasse 23, 1090 Vienna, Austria  
T +43 (01) 40400 25650, F +43 (01) 40400 45660  
arthur.hosmann@meduniwien.ac.at

## OVERVIEW

- Senior consultant neurosurgeon at the Medical University of Vienna
- Head of the neurosurgical ward, Dept. of Neurosurgery, Medical University of Vienna
- Specialized in vascular/endovascular Neurosurgery and Intensive Care Medicine
- Main research topics: vascular neurosurgery & multimodality neuromonitoring
- PhD in Neuroscience, Medical University of Vienna
- State doctorate in Neurosurgery, Medical University of Vienna
- First-/Last-author of > 20 peer-reviewed articles & Co-author of 18 papers (h-Index 11)
- Clinical Fellowship at the Department of Neurosurgery, P.D. Hinduja Hospital & Medical Research Center, Mumbai, India (Dr. Basant Misra)



- International experience: Charité Berlin, Chulalongkorn University Bangkok
  - Languages: German, English, French, Russian
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## **SILVINA ILUȚ**

### **ROMANIA**

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#### **PERSONAL INFORMATION**

First name(s)/ Surname(s): Silvina Iluț

Address(es): Eugen Ionesco Street, 75C, Cluj-Napoca, Romania

Telephone(s): 0740 178 965

E-mail: silvina.Iluț@umfcluj.ro

Nationality: Romanian

Date of birth: 09/10/1981

Occupational field-Competence- Discipline: Education and Health: Medicine- Neuroscience- Neurology

#### **WORK EXPERIENCE**

**2022–present** Lector – Neurology.

Discipline of Neurology and Pediatric Neurology, Department of Neurosciences.

Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

**2020–present** Senior neurology doctor

- clinical and paraclinical activity in the department with beds and ambulatory as a senior doctor with a permanent contract
- on-call service
- didactic, practical and theoretical activities with students and residents doctors
- clinical research activities
- writing specialized papers in national and international journals
- member in interdisciplinary research groups
- participation in national and international congresses
- investigator/sub-investigator in clinical, multicenter studies

Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania

Cluj Emergency County Hospital- Neurology department II, Cluj-Napoca, Romania

**2020 - present** Senior neurology doctor

Private consultations

RoNeuro Institute – Research and diagnostic of neurological diseases

**2015-2020** Specialist neurology doctor

Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania  
Cluj Emergency County Hospital- Neurology II department, Cluj-Napoca, Romania- on-call service

**2018-2023** Resident radiology doctor

Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania  
Cluj Emergency County Hospital - Radiology and medical imaging department, Cluj-Napoca, Romania

**2007-2014** Resident neurology doctor

- participation in all course activities during the entire residency
- clinical activity at the patient's bedside
- didactic, practical activities, carried out with students on an hourly basis
- clinical research activity
- participation in congresses

Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania  
Cluj Emergency County Hospital- Neurology II department, Cluj-Napoca, Romania

## **EDUCATION AND TRAINING**

PhD student - Psychiatry department

Confirmation of the Order of the Minister of National Education Nr. 5474 from 14.11.2018/2017,  
PhD diploma Series J Nr. 0028045, issued with nr. 41 from 28/11/2017  
Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania

**2020** Senior neurology doctor

Confirmation of the Order of the Minister of Health Nr. 1541/2020  
Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania

**2015** Specialist neurology doctor

Confirmation of the Order of the Minister of Health Nr. 1/2015  
Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania

**2000-2006** Medical Doctor (MD)

General medicine 9.77  
Graduation diploma Series Y Nr.0080969 from 22/09/2006  
Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania

**1996-2000** Graduation diploma Series S Nr.0005794 from 07/09/2000

Gheorghe Șincai National College, Baia Mare

## **RESEARCH ACTIVITY AND RESEARCH GRANTS**

- Project name: "Instrument informațional pentru creșterea calității, vi-zibilității și interdisciplinarității programelor doctorale" within the framework of the Sectoral Operational Program for the Development of Human Re-sources 2007 – 2013. Priority axis 1., Education and professional training in support of economic growth and the development

of the knowledge-based society". Contract POSDRU/21/1.5/G/37486. Coordinator: Prof. Dr. Liana Fo-doreanu. Participants: Dr. Crișan Cătălina, Dr. Casu Mihai, Dr. Iasmina Dra-gomir, Dr. Cora Marginean, Dr. Iluț Silvina, Dr. Valcu Melania, Dr. Vremarioiu Anca – Prize III

- Certificate of completion of the project co-financed from the European Fund through the Human Resources Development Sectoral Operational Pro-gram 2007-2011 – „Investește în oameni” – „Instruire în noile tehnologii med-icale și perfecționare pentru medicii și asistenții medicali din ambulatorii – POSDRU 81/3.2/S/46975

## **PERSONAL SKILLS AND COMPETENCES**

Mother tongue(s): Romanian

Other language(s): English, French

Managerial competencies: Health Services Management, Certificate Series C Nr. 037879 from 05/10/2015

Certifications:

- 2021: Cerebral Doppler Ultrasonography atestate (Certificate Series C Nr. 049701)
- 2019: Homeopathy atestate (Certificate Series C Nr. 045556)
- 2018: Palliative Care (Certificate Series C Nr. 044650)
- 2008: Certificate of Completion for OC-RDC 4.5.3 (HTML)
- 2002: Pedagogy module

Social skills and competences:

- Excellent interaction with students, resident, doctors, scientists and administrative staff
- Excellent communication skills

Technical skills and competences:

- Very good for what is needed in scientific and educational activity

Computer skills and competences:

- 2000: Certificate of professional skills - informatics
- Microsoft Word, Power Point, Excel

Organizational skills and competences:

- Advanced organisational skills and competences

Affiliation to international and national societies

- European Academy of Neurology - member
- Romanian Society of Neurology - member

Information about the scientific activity:

- ISI Web of Science works – 18 of which 17 are in-extenso articles (H-index 1)
- BDI /Posters – 6 Articles BDI, 3 Posters
- Books and Chapters - 27
- Research projects (grants) – member - 2
- Clinical studies - 7



## **KLAUS U. KLEIN**

### **AUSTRIA**

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#### **PERSONAL INFORMATION**

Associate Professor of Anesthesiology and Critical Care Medicine  
Medical University of Vienna  
Vienna General Medical Hospital  
Währinger Gürtel 18-20  
1090 Vienna, Austria  
E-Mail: klaus.klein@meduniwien.ac.at

Klaus U. Klein, MD is an anesthesiologist and intensive care physician who specializes in avoiding perioperative organ damage and promoting rapid recovery from surgery and trauma. Dr. Klein grew up in Frankfurt/Main in Germany and completed his undergraduate studies at Medical Schools in Erlangen-Nuremberg and Heidelberg-Mannheim. He completed his junior house officer rotation at The Royal London Hospital, Plymouth Hospitals and Torbay Hospital in the United Kingdom and his residency at Johannes-Gutenberg University Medical Center in Mainz, Germany. After having moved to the Medical University of Vienna, Austria, he became Associate Professor for Anesthesia and Critical Care Medicine. Dr. Klein's research interests include injury of vital organs such as the lungs, heart, and especially the brain in the perioperative setting. In particular, he is interested in unravelling the injurious effects of altered oxygen conditions (oxygen oscillations, hyperoxia) in acute lung injury and effects on the brain. Dr. Klein has an expertise in translational research environments, including cell culture experiments, small and large animal experiments and clinical research with focus on brain and lungs.

Recent publications include manuscripts in the British Journal of Anaesthesia, European Journal of Anaesthesiology, Anesthesia and Analgesia and Shock. He is a peer reviewer for multiple anesthesia and critical care journals.

Dr. Klein's research efforts have earned him ongoing grants from the Austrian Science Fund and the Major of the City of Vienna Scientific Fund. In 2022, Dr. Klein became Head of the Department of Anesthesiology at Sanatorium Hera in Vienna and is affiliated to the Medical University of Vienna, Austria.



## **PETER LACKNER**

### **AUSTRIA**

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Prof. Dr. Peter Lackner is the head of the Department of Neurology at Clinic Floridsdorf, Vienna, Austria. 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. He received his MD in the year 2004 from the Medical University Innsbruck. Prof. Lackner has a strong background in experimental research in Neuroinfectiology, Neurotraumatology, and experimental Stroke. His international experience includes research visits at the Bernhard-Nocht Institute for Tropical Medicine in Hamburg, Germany; the University of Witwatersrand, Johannesburg, South Africa, and at the Department of Basic Sciences and Physiology, at Loma Linda University, California, USA. He was the founder and group leader of the research group for Translational Neurocritical Care at the Medical University Innsbruck, Austria. Besides translational research, Prof. Lackner has a primary focus on clinical research in severe neurological illnesses where his main interests are traumatic brain injury and hemorrhagic stroke. He is head of the Karl-Landsteiner Institute of Clinical Research in Acute Neurology. Besides acute care, Prof. Lackner has a special interest in post-acute long-term care after critical neurological insults. In the year 2018, he became head of the department of Neurology of Clinic Penzing, Vienna, that has a focus on early neurorehabilitation as well as long-term neurocognitive rehabilitation in an outpatient setting. Since his call to Vienna, he has been deeply involved in the strategic planning of neurological care in Austria. In the year 2021, he was the medical founder of a new department of neurology focusing on acute care in the newly built Clinic Floridsdorf. He is member of several local and international societies for Neurology, Neurorehabilitation and Neurocritical Care and currently the head of the scientific board of the Austrian society of neurorehabilitation.

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## **JOHANNES LEITGEB**

### **AUSTRIA**

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#### **PERSONAL DATA**

**Birth date:** 6 May 1970

**Birth place:** Vienna/Austria

**Citizenship:** Austrian

**Marital status:** married

**Children:** Emilie 2004

Paul 2006

Johannes 2010

Charlotte 2013

**Languages spoken:** German, English

## **EDUCATION**

**1976 - 1979** Elementary School in Vienna

**1980 - 1988** High School (BRG 7) in Vienna

**1988** Graduation

**1988 - 1997** Medical School, University of Vienna

**June 1997** Graduation MD (MD thesis), 27 June 1997

**Oct 2005** Consultant

**since 2000** Research Fellow of IGEH/INRO

**2010 - 2017** PhD Studium (Public Health) University of Tranava

**2013 - dato** MBA Health Care Management, Economic Univ of Vienna

**Nov 2014** Good Clinical Practice

**March 2015** Assoc.Prof., Medical University of Vienna

**Mai 2015** Habilitation: „Untersuchungen zum Schädel-Hirn-Trauma In Österreich und seinen Nachbarstaaten“

**2017 Aug** PhD Defensio:“Economic effects of severe TBI“

## **ELECTIVES (AS STUDENT)**

**Jan-March 1995** Erasmus MB, Ch.B, D.A. (SA) Trauma Surgery, Hottentots Holland Hospital, Somerset west, Capetown, South Africa

**Sept 2005** D.T. Mininberg MD, FACS, FAAP, Emergency Medicine, Cornell University Medical Center, New York, New York, U.S.A

**1993 - 1997** Austrian Red Cross, Section of Blood Transfusion, Vienna

**1995 - 1997** Teaching Assistantship in Radiodiagnostic, University of Vienna, Prof. Lechner

## **MILITARY SERVICE**

**1997 – 1999** “Army Anesthesiologist” after Basic Training Program and Training for Military Medical Officer

## **RESIDENCY TRAINING**

**Oct 2005 - present** Trauma Surgery, University of Vienna, Prof. Hajdu

**Oct 2005** Board Certification in Trauma and Orthopaedic Trauma

**Oct 2004 - Oct 2005** Resident, Trauma Surgery, University of Vienna, Prof. Vecsei

**April 2004 - Sep 2004** Resident Orthopedics, Hospital Bad Radkersburg, Doz.Ehall

**Oct 2003 - March 2004** Resident Neuro Surgery, University of Vienna, Prof. Knosp

**July 2003 - Sept 2003** Resident Trauma Surgery, University of Vienna, Prof. Vecsei

**Jan 2003 - June 2003** Fellowship (cutting registrar) Trauma Surgery, Groote Schuur Hospital, University of Capetown South Africa, Dr. Nicol

**Oct 2002 - Dec2002** Resident Plast. and Reconstr. Surgery, University of Vienna, Prof.Frey

**April 2002 - Sept 2002** Resident Trauma Surgery, University of Vienna, Prof. Vecsei

**Feb 2002 - April 2002** Assistant, Institute of Anatomy, University of Vienna, Prof. Gruber  
**Oct 2001 - Jan 2002** Resident Cardiothoracic Surgery, University of Innsbruck, Prof. Laufer  
**April 2001 - Sept 2001** Resident General Surgery, University of Vienna, Prof. Jakesz  
**Aug 1999 - March 2001** Trauma Surgery, University of Vienna, Prof. Vecsei  
**June 1999 - July 1999** Heart Transplant Coordinator, University of Vienna, Prof. Wolner  
**Oct 1998 - March 1999** Resident Anesthesiology, University of Vienna, Prof. Zimpfer  
**May 1998 - Sept 1998** General Medicine, Hospital Korneuburg, Prof. Burghuber  
**Nov 1997 - April 1998** Trauma Surgery, Hospital Korneuburg, Dr. Hintringer

### IN A MANAGERIAL CAPACITY

- Consultant Department of Traumatology, MUW
- Head of task group Traumatic Brain Injury (TBI) of ÖGU (Österr.Gesellschaft für Unfallchirurgie/ Austrian Society of Traumatology)
- President of IGEH/INRO (Internationale Gesellschaft zur Erforschung von Hirntraumata / International Neurotrauma Research Organization)

### PUBLICATIONS

numerous publications in international journals (medline)

### LECTURES

courses for students, nurses, and medical technicians

### MEMBERSHIPS

- Austrian Society of Trauma Surgery since April 1999
- Society for the Advancement of Research in Trauma Surgery since January 2001
- International Neurotrauma Research Organisation (INRO)



## LYNNE LOURDES LUCENA

### THE PHILIPPINES

- Neurosurgery
- Chair, Neurotrauma Committee, Asian Australian Society of Neurological Surgeons (AASNS)
- Chair, Philippine Board of Neurosurgery (2015-2017)
- President, Up PGH Faculty and Alumni of Neurosciences (UPFANs 2021-2023)
- Vice President, Academy of Filipino Neurosurgeons Inc (2022-2023)
- Nominating Committee, World Federation of Neurosurgical Societies

- Lecturer and International Faculty (WFNS, AASNS, ACNS, ICRAN)
- Author, Internationally Published Researches (World Neurosurgery, Clinical Neurology and Neurosurgery)



## **MAHKAMJON MAHKAMOV**

### **UZBEKISTAN**

#### **PERSONAL DATA**

86, Ilgor str., Chilanzar dst.

Tashkent, Uzbekistan.

Postal code 100115

Mobile phone: +998903725150

E-mail: Makhkam@icloud.com; Makhkammakhkamov@gmail.com

#### **EDUCATION AND FELLOWSHIP**

**2002 – 2009** General Practice Physician, Tashkent Medical Academy;

**2009 – 2012** Neurosurgery Residency Program, Tashkent Medical Academy;

**2013 – 2014** Cerebrovascular And Microneurosurgery Fellowship Program In Neurosurgery Department Of Central Hospital Of Helsinki University, Helsinki, Finland;

**2016 — 2018** Basic Researcher Neurosurgeon At Republican Research Center Of Emergency Medicine;

**2018 (September – October)** Vascular Neurosurgery Postgraduate Program In Neurosurgery Department Of I.i. Dzhanelidze Research Institute Of Emergency Medicine, Saint-Petersburg, Russia;

**2019 (September – November)** Microneurosurgery And Microvascular Anastomosis Fellowship Program In Neurosurgery Department Of Asahikawa Red Cross Hospital, Asahikawa, Japan.

#### **WORK EXPERIENCE**

**2012 — 2014** Neurosurgeon At Republican Scientific Center Of Neurosurgery;

**2014 — 2016** Neurosurgeon At Republican Research Center Of Emergency Medicine;

**2018 — 2022** Head Of The Department Of Pediatric Injury Surgery And Neurosurgery At Republican Research Center Of Emergency Medicine;

**2022 — Present Day** Head Of The Department Of Cerebrovascular Neurosurgery;

#### **SCIENTIFIC WORK**

“Development of Focused-Surgical Methods of Cerebral Aneurysms With Use of 3d Reconstructive Anatomy” Phd Degree On 2018.

“Optimization of Surgical Treatment Tactics Using 3D-Modeling And Study Of The Genome



of Non-Traumatic Intracerebral Hemorrhages And Arteriovenous Malformations” Doctor Of Medical Science (Dsc) Degree 2021.

### **SPECIAL INTERESTS**

Skull base, cerebrovascular surgery, brain tumors, microvascular anastomosis and traumatic brain injuries.

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**AMMAR MALLOUHI**  
**AUSTRIA**

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Ammar Mallouhi completed his Specialization in diagnostic radiology in Innsbruck, Austria, in 2006 and he was awarded a Venia Docendi in 2007. He has been working as an associate professor in the Department of Neuroradiology at Vienna Medical University in Vienna, Austria, since 2010. He has published more than 60 papers and Proceedings in reputed journals and books. He was awarded with several international scientific awards including three Certificate of Merit from the Radiological Society of North America.

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**DIMITAR MASLAROV**  
**BULGARIA**

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Prof. Dimitar Maslarov is the head of the Neurology Clinic at the First University Multiprofile Hospital St. John Krastitel - Sofia. He is the author and co-author of more than 550 scientific works, of which more than 250 have been published in specialized magazines. He is the author and co-author of more than 50 textbooks, manuals and study aids. He has more than 5000 citations and h-index – 27. He is a member of the permanent Expert Council of the National Neurology Consultant. He is a member of 8 foreign and 10 Bulgarian scientific, creative and professional organizations, of which he is the chairman of the Management Board of one, and a member of the Management Board of two others. He is a representative of Bulgaria in two Expert Panels of the European Academy of Neurology (EAN). Responsible editor or member

of the editorial boards of seven Bulgarian and one foreign scientific journal. He is a member of the Presidium of the European Federation of Neurorehabilitation. He is the representative of Bulgaria in the European Stroke Organization and the coordinator of the Stroke Action Plan 2018-2030. He is a member of the National Council on Prices and Reimbursement of Medicinal Products. He is the representative of Bulgaria to the Council of Europe in the subgroup for Joint Scientific Consultations. He is a member of the state examination committee for obtaining a specialty in neurology. He is the recipient of the “Signum Laudis with ribbon” of the Medical University - Sofia. He is a recipient of the Badge of Honor of the city of Haskovo. Honorary Citizen of Velingrad. He has been repeatedly included in the rankings “Doctors whom Bulgarians trust” and “The best doctors in Bulgaria”.

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## **CHRISTIAN MATULA**

### **AUSTRIA**

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Christian Matula, MD, PhD serves as Professor and Vice-Chairman of Neurosurgery at the Neurosurgical Department, Medical University of Vienna, Austria. He is the director of Skull Base Division, Head of the Neurotrauma, and Chairman of the Educational and Training Committee. Internationally, he currently is holding the position of the Chairman of the Education Committee of the AMN (Academy for Multidisciplinary Neurotraumatology) and full member of the Management Committee, the Core Executive body of this organization. Most recently, he has developed the NTSC Project Vienna (NeuroTrauma Simulation Center Vienna). He is one of the key-founders of Global Neuro, an independent foundation aiming to improve quality of life for patients suffering from neurosurgical disorders, where he served as past Vice President and is Member of the Foundation Board. Additionally, holds the position of member of the Educational Committee of the World Federation of Neurological Surgery (WFNS) and also the Neurotrauma Committee of the WFNS, as well as 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 200 workshops and courses worldwide and has given more than 700 invited lectures as visiting professor all over the world. He is the author of more than 350 publications mostly on microsurgical techniques, skull base surgery, neuroendoscopy, neurotrauma and

education and training in Neurosurgery. His scientific work includes several textbooks, atlases, 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.

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## **GILRAED MOTA GARCÍA**

### **MEXICO**

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#### **PROFESSIONAL SUMMARY**

Dr. Gilraed Mota García is an esteemed neurosurgeon with over 15 years of specialized experience in cranial surgery, spinal surgery, cerebral vascular surgery, neurotraumatology, and brain tumor management. Currently, he leads the Department of Neurosurgery at UMAE H.E. 14, IMSS in Veracruz, where he has propelled significant advancements in medical technology and resident education. With robust medical training and relentless dedication to surgical innovation, Dr. Mota has contributed to technological progress in neurosurgery and established high standards in training programs.

#### **KEY ACHIEVEMENTS**

- **Departmental Leadership:** As the Chief of Neurosurgery at UMAE H.E. 14, IMSS, he has implemented cutting-edge technologies and significantly enhanced clinical protocols.
- **Educational Expertise:** Formerly held the position of Head Teacher of the Neurosurgery Residency at UMAE HES #14 “Adolfo Ruiz Cortínez”, IMSS, imparting essential knowledge and fostering the development of future neurosurgery leaders.
- **Commitment to Excellence:** His numerous presentations at international congresses and publications reflect his commitment to neurosurgical forefront and his skill in effectively conveying complex knowledge.

#### **EDUCATION AND CERTIFICATIONS**

- **Neurosurgery Training:** Completed his residency at UMAE #25 IMSS/UEM and the Traumatology and Orthopedics Hospital #21 IMSS Monterrey.
- **Recertification:** Recertified by the Mexican Council of Neurological Surgery in 2016 and 2021.
- **Specialization:** Certified in Pediatric Neurosurgery in 2018.

#### **PROFESSIONAL MEMBERSHIPS**

- Active member of the Mexican Society of Neurological Surgery and the North American Spine Society.
- Participant in the American Association of Neurological Surgeons (AANS) since 2008.

### **SPECIFIC SKILLS**

- **Advanced Surgery:** Proficient in high-complexity procedures, with outstanding results in the management of brain trauma and conditions.
- **Innovation and Technology:** A pioneer in integrating cutting-edge techniques and equipment into neurosurgical treatment.
- **Research and Teaching:** An active proponent of clinical research and a dedicated mentor in academic and practical training of residents.

### **LANGUAGES**

Spanish (Native)

English (Fluent)

### **CONTACT**

Phone: +52 2291757535, +52 229 688 2063

Personal Email: gilraed@gmail.com

Institutional Email: gilraed.mota@imss.gob.mx



**DAFIN F. MUREȘANU**  
**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), Chariman of the EAN Communication Committee and EAN Board Member, Co-Chair EAN Scientific Panel Neurotraumatology, Past President of the Romanian Society of Neurology, President of the Society for the Study of Neuroprotection and Neuroplasticity (SSNN), Member of the Romanian Academy, 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. Mureșanu is a specialist in Leadership and Management of Research and Health Care Systems (specialization in Management and Leadership, Arthur Anderson Institute, Illinois, USA, 1998 and several international courses and training stages in Neurology, research,

management and leadership). Professor Dafin F. Mureșanu is coordinator in international educational programs of European Master (i.e. European Master in Stroke Medicine, University of Krems), organizer and co-organizer of many educational projects: European and international schools and courses (International School of Neurology, European Stroke Organisation summer School, Danubian Neurological Society Teaching Courses, Seminars - Department of Neurosciences, European Teaching Courses on Neurorehabilitation) and scientific events: congresses, conferences, symposia (International Congresses of the Society for the Study of Neuroprotection and Neuroplasticity (SSNN), International Association of Neurorestoratology (IANR) & Global College for Neuroprotection and Neuroregeneration (GCNN) Conferences, Vascular Dementia Congresses (VaD), World Congresses on Controversies in Neurology (CONy), Danube Society Neurology Congresses, World Academy for Multidisciplinary 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 (209 papers indexed on Web of Science-ISI, H-index: 22) as well as contributions in monographs and books published by prestigious international publishing houses.

Prof. Dr. Dafin F. Mureșanu 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.



**EUN-SUNG PARK**  
**SOUTH KOREA**

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Department of Neurosurgery, Wonkwang University Hospital, Wonkwang University School of Medicine, 895 Muwang-Ro, Iksan, Jeonlabuk-do, Republic of Korea

## CONTACT DETAILS

Email : pes0401@naver.com

Office : +82-63-859-1460

Fax : +82-63-852-2606

## EDUCATION

2024 PhD course, Neuroscience, Wonkwang University School of Medicine

2020 - 2023 MS, Neuroscience, Wonkwang University School of Medicine

2002 - 2009 MD, Wonkwang University School of Medicine

## POSTGRADUATE TRAINING / WORK EXPERIENCE

2010 - 2012 Army Surgeon

2013 - 2018 Internship and Residency, Department of Neurosurgery, Wonkwang University Hospital

2018 - 2020 Clinical Fellow, Department of Neurosurgery, Wonkwang University Hospital

2021 - 2023 Assistant Professor, Department of Neurosurgery, Wonkwang University Hospital

2024 - Clinical Associate Professor, Department of Neurosurgery, Wonkwang University Hospital



**JURE PRELOŽNIK**  
**SLOVENIA**

## PERSONAL INFORMATION

I am Jure Preložnik, 4th-year medical student at the Faculty of Medicine, University of Maribor, Slovenia. I was born on 1st of May 2001 in Maribor, Slovenia.

## WORK EXPERIENCE

Being thrilled by the anatomy of the central nervous system, I developed a strong interest in neurosurgery early. In September 2021, I had my first experience in an operating room, where I observed a tumor removal procedure in the hypophyseal area. Since then, I have witnessed various surgeries, including laminectomies, craniotomies, microfenestrations, vertebral fixations, different tumor removals, as well as the clipping of aneurysms. Additionally, I also had several opportunities to assist.

To further enhance my surgical skills, I began volunteering in the surgical department of the emergency department at the same hospital in July 2023. There I obtained medical histories and examined patients under the supervision of a resident doctor. I also had the opportunity to observe and assist with various minor procedures.

In October 2023, I also took on the role of a surgery tutor. Since then, I conducted a workshop on surgical suturing during a two-day annual event at our faculty. As a tutor, I also have workshops for 3<sup>rd</sup> year students, where I teach them basic surgical skills.

In May this year I will start volunteering at the neurosurgery department at the General Hospital Celje.

At the Faculty of Medicine I am a member of Senate, Research Committee and Study evaluation Committee. At the University of Maribor I am a member of Senate.

I am the president of the choir at our faculty.

## RESEARCH EXPERIENCE

I am currently involved in research project, which focuses on risk factors for traumatic brain haemorrhage. My mentor is the neurologist, Assistant Professor Martin Rakuša, MD, PhD.

From 27. 10. 2023 – 28. 10. 2023 I attended the 1st Warsaw Students' Neurosurgical International Conference in Warsaw, Poland. I was a passive participator.



## IGNACIO PREVIGLIANO

### ARGENTINA

Dr. Ignacio Previgliano is Professor of Neurology at Maimonides University and Director of the Critical Care Specialization Course at the same university. He was president of the Argentinean Intensive Care Society, Director of the Stroke Council of the Argentinean Cardiology Society, and Treasurer of the Argentinean Society of Trauma Medicine and Surgery.

He developed his medical career in the Hospital Fernandez in Buenos Aires Argentina being successively ICU staff, ICU coordinator, head of Transplant, and Organ Procurement Unit, Head ICU Unit A, Head ICU division and Hospital Director.

He is Laureate of the Argentinean Academy of Medicine and received several awards including the 9<sup>th</sup> Congress of the World Federation of Societies of Intensive and Critical Care Medicine Distinction.

He published 169 articles in peer review journals of Anesthesiology, Critical Care, Internal Medicine, Neurology and Neurosurgery. He also collaborated in 48 chapters of different books related to those specialties and has his own books “Evidence Based Neurocritical Care” and “Point of Care Ultrasound: Critical Ultrasound Manual”. His scientific production has been quoted in 587 papers.

He is now head of the Argentinean Critical Ultrasound Association Research Group and member

of the Ethics Tribunal and of the Council of Former Presidents of the Argentinean Intensive Care Society.

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**MARTIN RAKUŠA**  
**SLOVENIA**

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Assistant Professor Martin Rakuša, MD, PhD, is a consultant neurologist at the Division of Neurology and the head of the Science and Research Department at the University Medical Centre Maribor, Slovenia. He also teaches at the Faculty of Medicine and Faculty of Health Sciences, University of Maribor, and University Alma Mater.

He obtained scientific and clinical training at several European Universities and neurologic clinics. He received a Chevening grant for clinical training at the Institute of Neurology, Queen Square London and a Fulbright scholarship for post-doc research at the Mayo Clinic, Rochester, Minnesota, USA.

His main interest is in cognitive neurology, pain and traumatic brain injury. He is the editor of Acta Neurologica Belgica and Slovenian Medical Journal.

A list of his publications is available at <https://orcid.org/0000-0003-4433-3985>.

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**KATRIN RAUEN**  
**GERMANY, SWITZERLAND**

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Head Physician, Neurological Rehabilitation Center Godeshöhe GmbH, Bonn, Germany  
Senior Research Consultant, Department of Traumatology, University Hospital Zurich, and Center for Neuroscience Zurich, Switzerland  
Visiting Scientist, Institute for Stroke and Dementia Research (ISD), Ludwig Maximilian University Munich, Germany



Research Group Leader “Traumatic Encephalopathy & Neuropsychiatric Rehabilitation”

Katrin Rauen was appointed Head Physician for Neurorehabilitation, Psychiatry, Psychotherapy & Psychosomatics of the Neurological Rehabilitation Center Godeshöhe GmbH, Bonn, Germany - one of the largest rehabilitation centers for brain injuries in Europe - in 2023. Beyond that, Katrin Rauen holds a dual affiliation to the Universities of Zurich and Munich aiming to increase scientific and clinical knowledge regarding neuropsychiatric long-term outcome after brain injury over the lifespan. Her international research group is supported by the Betty & David Koester for Brain Research, the Palatin-/ USZ-Foundation and the Julitta & Richard Müller Foundation. Rauen’s overarching goals are (1) to develop new diagnostic algorithms to identify patients at risk of poor outcome after a brain injury early, (2) to foster research on the link between chronic posttraumatic neuroinflammation and neurodegeneration, and (3) to implement a brain-injury specific neuropsychiatric rehabilitation across Europe, thereby improving quality of life for patients and their families after brain injuries.

Katrin Rauen received her M.D. in 2011 from Ludwig Maximilian University (LMU), Munich, Germany, and gained international experience at the Queens Square Institute of Neurology, UCL London, England, at the Kaiser Permanente Rehab Center, Vallejo, California, USA, and at the University of Stellenbosch in South Africa. Her doctoral thesis “Influence of vasopressin receptors and aquaporins on secondary brain injury following experimental TBI”, at Prof. Plesnila’s laboratory at LMU Munich, was honored summa cum laude in 2014. In 2022 she received the Venia Legendi in Neuropsychiatry from the University of Zurich (UZH). In her habilitation thesis on “Predictors and clinical markers with neuropsychiatric implications for long-term outcome after traumatic brain injury”, Katrin Rauen put a groundbreaking focus on Quality of Life for patients and their families after brain injury over the lifespan. She serves as board member of the European Neurotrauma Organization (ENO), the Competence Center for Sleep & Health Zurich, the Theodor-Hellbrügge Foundation, and is Co-Chair of the Scientific Panel Neurorehabilitation of the European Academy of Neurology (EAN). Beyond that, she serves as editor of the Journal of Neurology, and as reviewer for more than 20 high-ranking scientific journals. She published 25 peer-reviewed original articles, six reviews, and five book chapters. Katrin Rauen received honors and awards from national and international societies such as the German Society of Neurology, the German Society of Neurosurgery, the German Society of Neuroscience, the European Academy of Neurology, the European Brain Injury Consortium, and the International Neurotrauma Society. As a leading Neurotrauma expert with a profound background in basic and clinical brain research, she advances scientific and clinical careers of young scientists and medical doctors in neuropsychiatric brain research and clinical practice.

## **CONTACT INFORMATION**

E-mail: [Katrin.rauen@uzh.ch](mailto:Katrin.rauen@uzh.ch)

LinkedIn: <https://www.linkedin.com/in/pd-dr-katrin-rauen-md-febn-207680111/?originalSubdomain=de>



## **NICOLE VON STEINBÜCHEL**

### **GERMANY**

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#### **ACADEMIC POSITIONS**

**since 2023** Adjunct professorship at the University of Innsbruck

**2005 - 2023** Director of the Institute for Medical Psychology and Medical Sociology, University Medical Center Göttingen

**2004 - 2005** Director of the Institute for Medical Psychology, University Medicine Göttingen

**2005 - 2006** Professeur suppléante at the Université de Genève, Département de l'instruction publique, Geneva, Switzerland

**2001 – 2004** Head of the Department of Neurogerontopsychology, Gerontopsychiatrie, Belle-Idée University Hospital, Geneva, Switzerland

**2001 - 2004** Professeur associé at the Université de Genève, Département de l'instruction publique, Geneva, Switzerland

**1999 - 2000** Dorothea-Erxleben research professorship, Magdeburg

**1993 - 1998** C-3 Professorship in Medical Psychology, LMU, Munich

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## **ȘTEFAN STRILCIUC**

### **ROMANIA**

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Dr. Ștefan Strilciuc is the Director of the Research Center for Functional Genomics, Biomedicine and Translational Medicine ([genomics-center.ro](http://genomics-center.ro)) at Iuliu Hatieganu University of Medicine and Pharmacy. As Associate Research Professor, his work lies at the intersection of public health and medicine, having been involved in over 50 interventional and observational clinical trials and studies, including economic evaluation in health. Strilciuc is also an advisor to the Romanian Health Minister and has served as an international expert for central healthcare institutions such as the National Health Insurance House, actively contributing to healthcare reform and management of an annual health budget of over €10 billion. As a member of the Romanian Health Observatory, he has also contributed to designing and disseminating original research reports and advocacy plans for patients in Eastern Europe.



## **TANONGSON TIENTHAVORN**

### **THAILAND**

#### **EDUCATION**

**2002** Doctor of Medicine (Mahidol University, Phramongkutklao College of Medicine)

**2011** Doctor of Health Services Management, University of New England, Australia

Thesis title: Managing Pre-hospital Emergency Medical Services of Road Traffic Accidents in Khon Kaen Province, Thailand

**2017** Master of Medical Education, University of Dundee, UK

Dissertation title: Evaluation of the impact of Final Year Ward Simulation Exercise (FYWSE) for Enhancing Non-Technical Skills (NTS): Analysis of written feedback of final year undergraduate medical students

**2023** Doctor of Philosophy, Medical Education, University of Dundee, UK

Thesis title: An exploration of Simulation Based Medical Education (SBME) innovation through the COVID-19 pandemic: A comparative case study of two medical schools (Scotland and Thailand)

#### **POSITION**

Deputy Director and committee, Phramongkutklao Simulation Center, Phramongkutklao College of Medicine

Lecturer, Military and Community Medicine, Phramongkutklao College of Medicine

Committee, Military Medicine Center of Excellence, Phramongkutklao Hospital and College of Medicine

Committee, Education Quality Assurance, Phramongkutklao College of Medicine

Committee, External affairs, Phramongkutklao College of Medicine

#### **PUBLICATION(S)**

1. Phenwan T, Srisuwan P, Tienthavorn T. Living Will Awareness and Collective Trust between Physicians, Cancer Patients and Caregivers: A Qualitative Study. *Journal of Palliative Care Medicine*. 2015. 2015. Available from <http://www.omicsgroup.org/journals/living-will-awareness-and-collective-trust-between-physicians-cancer-patients-and-carers-a-qualitative-study-21652165--7386.10007386.10001205.205.php?aid=36759> 36759
2. Tienthavorn T, Rangsin R, Kaewput W, Kunratanaporn T, Nivesvivat T. Medical Simulation and Phramongkutklao College Medicine Simulation Center, The Association of Military Surgeons of Thailand under the Royal Patronage of His Majesty the King 2015: 572015: 57--6767
3. Phenwan T, Srisuwan P, Tienthavorn T. Perception of Advance Directive in Thai Women with Cancer: A Qualitative Study. *Walailak Journal of Science & Technology*. 2019. 2019. Available from <http://wjst.wu.ac.th/index.php/wjst/article/view/3642/11413642/1141>
4. Sirirat W, Srisuwan P, Tienthavorn T. Attitude and Factors Associated with Caregiver Burden in Patients with Alzheimer's Disease. *Journal of Primary Care and Family Medicine*. 2019. 2019. Available from <https://www.pcfmjournal.com/product-page/pcfm-vol-22--no-11--jan-apr-2019> 2019

## BOOK CHAPTER

Tienthavorn T, Emergency Medical Services Quality Improvement and Indicators Used in EMS. Principle of Thai Emergency Medical Services in 2008. 2008. KhonKaen Printing Co.,Ltd: 2008 2008

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## HELMUT TRIMMEL AUSTRIA

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Specialist in anesthesiology and intensive care medicine, general practitioner, emergency doctor  
Head of the Department of Anaesthesiology, Emergency and Critical Care Medicine  
Full Professor in Anesthesiology, Emergency and Critical Care Medicine at the Danube Private University

Vice President of the Austrian Society for Anesthesiology and Intensive Medicine (ÖGARI)

Head of the Karl Landsteiner Institute for Emergency Medicine, Medical Simulation and Patient Safety

Deputy Medical Director Christophorus Air Rescue, Austria

Publikations - MedLine

Prof. Trimmel graduated and completed his habilitation at the Medical University of Vienna. He is Director of the Department of Anaesthesiology, Emergency and Critical Care Medicine at the Wiener Neustadt Regional Hospital since 2000.

His research interests include prehospital emergency medicine, traumatic brain injury, medical simulation, and patient safety.

Prof. Trimmel is a member of numerous scientific societies and organizations as well as the State Medical Council in Lower Austria.



## **NILDA TURGUT**

### **TURKEY**

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Professor MD, Tekirdag Namik Kemal University, Faculty of Medicine, Department of Internal Medical Sciences, Neurology Department / TURKEY

#### **EDUCATION INFORMATION**

**Expertise in Medicine:** 1993-1998 Istanbul University, School of Medicine, Department of Neurology

**Degree:** 1986-1992 Ankara University, School of Medicine

**Foreign language:** English, German

#### **MEMBERSHIPS TO SCIENTIFIC ORGANIZATIONS**

Turkish Neurology Association

Turkish EEG-EMG Association

Turkish Stroke Association

EAN

#### **SPECIAL INTERESTS**

Cerebrovascular diseases

Neuroimmunology

Neurophysiology

#### **TASKS**

Head of the Neuromuscular Center

Head of the Stroke Unit

Head of the Health Science Institute

\*Lots of articles about Cerebrovascular diseases, Neuroimmunology and Neurophysiology

\*Lots of Postgraduate Thesis Consultancy, National and International Projects

**Awards:** Neurophysiology and Neuroimmunology fields



## **JOHANNES VESTER**

### **GERMANY**

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Born in 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. From 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 - President of the Academy for Multidisciplinary Neurotraumatology (AMN).



## **PIETER E. VOS** **THE NETHERLANDS**

### **GENERAL INFORMATION**

Department of Neurology

Slingeland Hospital

Kruisbergseweg 25

7000 AD Doetinchem

The Netherlands

Tel. +31.314.329911

E-mail: p.vos@slingeland.nl

Pieter E. Vos is a neurologist at the Department of Neurology, Slingeland Hospital, the Netherlands. Research activities were connected with traumatic brain injury. Focus of his research activities was aiming to unravel the clinical, biochemical, and genetic determinants of neuroplasticity and recovery after mild, moderate, and severe traumatic brain injury. These days patient-centered activities relate care and cure processes in clinical neurology. Member of the Dutch Society for Neurology and the management group (co-chair) of the scientist panel on neurotraumatology of the European Academy of Neurology.

### **KEY PUBLICATIONS**

1. Frankel M, Fan L, Yeatts SD, Jeromin A, Vos PE, Wagner AK, Wolf BJ, Pauls Q, Lunney M, Merck LH, Hall CL, Palesch YY, Silbergleit R, Wright DW. Association of Very Early Serum Levels of S100B, Glial Fibrillary Acidic Protein, Ubiquitin C-Terminal Hydrolase-L1, and Spectrin Breakdown Product with Outcome in ProTECT III. *J Neurotrauma*. 2019 Oct 15;36(20):2863-2871.
2. Poon W, Vos P, Muresanu D, Vester J, von Wild K, Hömberg V, Wang E, Lee TM, Matula C. J Cerebrolysin Asian Pacific trial in acute brain injury and neurorecovery: design and methods. *J Neurotrauma*. 2015 Apr 15;32(8):571-80.
3. Lingsma H, Andriessen TM, Haitsema I, Horn J, van der Naalt J, Franschman G, Maas AI, Vos PE, Steyerberg EW. Prognosis in moderate and severe traumatic brain injury: external validation of the IMPACT models and the role of extracranial injuries. *J Trauma Acute Care Surg*. 2013 Feb;74(2):639-46
4. Vos PE, Alekseenko Y, Battistin L, Ehler E, Gerstenbrand F, Muresanu DF, Potapov A, Stepan CA, Traubner P, Vecsei L, von Wild K; European Federation of Neurological Societies. Mild traumatic brain injury. *Eur J Neurol*. 2012 Feb;19(2):191-8.
5. Vos PE, Jacobs B, Andriessen TM, Lamers KJ, Borm GF, Beems T, Edwards M, Rosmalen CF, Vissers JL. GFAP and S100B are biomarkers of traumatic brain injury: an observational cohort study. *Neurology*. 2010 Nov 16;75(20):1786-93.
6. Stulemeijer M, van der Werf S, Borm GF, Vos PE. Early prediction of favourable recovery 6 months after mild traumatic brain injury. *J Neurol Neurosurg Psychiatry*. 2008 Aug;79(8):936-42.



# **HARALD K. WIDHALM**

## **AUSTRIA**

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### **GENERAL INFORMATION**

Born: 11.5.1978

Nationality: Austrian

### **EDUCATION**

Scheibenberggasse, 1180 Vienna (elementary school)

Albertus Magnus-Schule, 1180 Vienna (grammar school), graduation: May 1996

Study at the Medical University of Vienna

Begin: September 1996, End/promotion: June 18th 2001 / July 6th 2001

### **ARMY**

October 1<sup>st</sup>, 2001 - Mai 31<sup>st</sup>, 2002 served one's time

Medical Army Service

### **CLINICAL-TRAINEESHIP**

Trauma Surgery (Klagenfurt, Voecklabruck), Internal Medicine (Eisenstadt), Gynecology (Vienna), General Medicine Praxis

(Lech/Arlberg), Teaching doctor's office for Orthopedics (Vienna)

### **VISITATIONS**

**07/1997:** Dep. of Laboratory, Janeway Child Health Centre, St.Johns, CA Leiter: Prof.Chandra

**07/2006:** Dep. of Orthopaedics, Ann Arbor University, Michigan, USA Leiter: Prof.Carpenter

**08/2006:** Dep. of Orthopaedics, Metro Health Hospital Grand Rapids, USA Leiter: Prof.Vasiu

**09/2009:** Dep. of Laboratory, Mount Sinai Hospital, New York, USA Leiter: Prof.Palese

**12/2015:** Sportsclinic Austria / Gelenkpunkt, Innsbruck, AUT Leiter: Prof.Fink, Prof.Hoser

### **SCIENTIFIC FELLOWSHIP**

2013-14: Department of Orthopaedics and Sports medicine, Medical University of Pittsburgh, US, Head: Prof Dr.Freddie Fu

**Foreign languages:** English

### **SPECIALIZATION**

Trauma surgery, Sports medicine Injuries, ACL-injuries

Therapy of cartilage lesions,

Therapy of morbidly obese persons,

Polytrauma-management,

Head-Trauma-Injuries



## Health Care Management

### EDUCATION

**2022** Appointed head of the outpatient clinic for sports injuries at Medical University of Vienna

**2021** Appointment as Associate Professor (Ap.Prof.)

**2021 Diploma:** Additional subject sports traumatology

**2021 Diploma:** MBA-Health Care Management

**2019** Head of the acute team (team leader), senior physician in charge of the ward

**2019** nomination of medical specialist for Orthopedics and Traumatology, Med. Univ. of Vienna

**2017 – 2018** Educational training in Medical specialist for Orthopedics, Hospital Zwettl, Austria

**2016 habilitation:** Traumatology

**2011** medical specialist for Trauma Surgery

**2007 – present:** M.B.A. Health Care Management (Expected December 2016)

**1996 – 2001:** M.D. (Dr.med.univ.), Medical University of Vienna, Austria

**2001 – 2002:** Federal Armed Forces, Austria

### FELLOWSHIPS

07/1997: Janeway Child Health Centre, St.John's, Newfoundland, Canada

Prof. Dr. Ranjit K. CHANDRA

2013-2014: AGA-Research Fellow, Department of Orthopaedic Surgery

University of Pittsburgh, 3471 Fifth Avenue, Kaufman Building, Suite 1011

Pittsburgh, PA 15213

Chairman: Freddie H. FU, MD, DSc (Hon), DPs (Hon)

### DIPLOMAS

Diploma for Emergency Medicine

**Research Activities:** Sports Injuries, ACL-Injuries, Cartilage, Joints, Obesity, Arthrosis, Head-Trauma

### REVIEW WORKING

Journal: Cartilage (2009, 2011)

Journal of Pediatrics (2011)

Pediatric Reports (2011)

Obesity Facts (2013)

Obesity Surgery (2013)

Clinical Orthopedics and Related Research (2013)

Journal of Neurotrauma (2014)

European Journal of Orthopaedic Surgery & Traumatology (2014)

Knee Surgery Sports Traumatology Arthroscopy (2014, 2015, 2016)

BMC Musculoskeletal Disorders (2015, 2016)

Wiener Klinische Wochenschrift (2015)

International Obesity Journal (2016)

American Journal of Sports Medicine (AJSM)

### SCIENTIFIC ACTIVITY

Publications in International journals (according to list)  
Scientific lectures at home/abroad (according to list)  
Supervision of graduate students at the Medical University of Vienna  
Habilitation in trauma surgery and traumatology (June 2016)  
Work as a reviewer for highly respected scientific journals  
Editorial Board: The Journal of Cartilage & Joint Preservation

### **SCIENTIFIC PUBLICATIONS**

41 papers as first or co-author in high-ranking international journals (IF: >100)  
01 book contribution

### **FURTHER FUNCTIONS**

Member of the works council for the scientific staff of the Med. Univ. Vienna (2008 – 2012), (2021-2026)  
Co-Director / Head of the Austrian Delegation: Weill Cornell Seminar – American Austrian Foundation (AAF)  
Head of the “Non-Medical Professions” department at the Vienna Medical Association (2009-2013)  
Lecturer at the Academy for Advanced Training and Special Training, Vienna – Nursing Department (since 2016)  
Lecturer at the Karl Landsteiner University Krems  
Lecturer at the Medical University of Vienna  
Lecturer at the emergency doctor training course ANS – Schöchler Medical Education  
Member of the Future Commission of the Austrian Society for Trauma Surgery (since 2019)  
Member of the ÖGU board as a temporary advisory board (2021-2024)  
Deputy head of the polytrauma working group of the Austrian Society for Trauma Surgery  
Epidemic doctor for the city of Vienna (since 2021)  
Member of the Neurotrauma Board – Medical University of Vienna  
Member of the expert group – Federal Ministry for Social Affairs, Health, Care and Consumer Protection  
Head of the working group for pelvic and hip injuries of the Austrian Society for Trauma Surgery

### **AWARDS**

Poster-prize: University-lecture, publications sponsored by Jubilaeumsfonds of the Austrian National-Bank: € 500,-- Incipient lesions of the cartilage in the knees of morbidly obese children and teenagers H. Widhalm, S. Marlovits, A. Neuhold , A. Dirisamer , V. Vécsei, K. Widhalm, Medical University of Vienna 2.12.2011

AGA – Research Fellowship: US \$ 40.000,-- AGA-Research Fellow, Department of Orthopaedic Surgery University of Pittsburgh, Chairman: Freddie H. Fu September 2013 – 2014

JOA 2014 – Travel Award: US \$: 2.000,-- Japanese Annual Meeting Orthopedics, Kobe, Japan, May 22nd -25th, 2014

Andlinger Fellowship of the American Austrian Foundation: € 2.000,--

## POSTGRADUATE STUDIES

**2007:** MBA Healthcare Management studies, Medical University of Vienna, Completion: May 2020

**2009:** Ph-D studies – N790, Medical University of Vienna

Bone & Joint Regeneration, Musculoskeletal MRI, Jaw Bone, Orthopedics & Trauma

Completion: Planned for the end of 2021

**2011:** Medical Education Course, MedUniWien, degree with university lecturer (2011)

## MEMBERSHIPS

Austrian Society for Trauma Surgery (2006)

Austrian Society for Hand Surgery (2006)

Society of Physicians (2007)

International Cartilage Repair Society (ICRS) (2008)

American Academy of Orthopedic Surgeons (AAOS) (2011)

AGA – European Society for Joint Surgery and Arthroscopy (2011)

GOTS – Society for Orthopedic Traumatological Sports Medicine (2012)

ESSKA: European Society of Sports Traumatology Knee Surgery & Arthroscopy (2016)

ESTES: European Society for Trauma & Emergency Surgery (2016)

SICOT: International Society of Orthopedic Surgery and Traumatology (2017)

ÖGOuT: Austrian Society for Orthopedics and Traumatology (2021)



**ANDREAS WINKLER**  
**AUSTRIA**

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Andreas Winkler, Prim. MD, MSc.

Specialist in Neurology, Neurosciences, Neurorehabilitation and Geriatrics.

Current position: Medical Director of the Institute Neuromed, Center for Clinic Sciences in Neurology.

- Graduation at the Medical University Vienna, Austria
- Postgraduate study at the National Institute of Neurology and Neurosurgery, Queen Square, London
- Postgraduate study at the Danube-University Krems/ Neurological Rehabilitation
- Diploma for Geriatrics/Palliative medicine
- Diploma medical specialist for neurology
- Scientific Chair of the BrainDays, Neuro-Competence Center
- Head of Department of Neurology, Haus der Barmherzigkeit, Vienna

- Diploma for the postgraduate study of medical executives
- Editor in Chief focus neurogeriatric, SpringerWienNewYork
- Univ. Lecturer at the Danube University, Krems, Austria
- Univ. Lecturer at the Medical University Vienna, MUW
- Head of Neurological Department at the Clinic Pirawarth, Medical Rehabilitation Center, Bad Pirawarth
- Medical Director of the Institute Neuromed, Center for Clinic Sciences in Neurology
- Vice-President of Alzheimer Austria,
- President of the Austrian Society for Clinical Sciences in Neurorehabilitation (ÖGKFR)
- Numerous scientific publications in neurological and other medical journals
- Member of various international scientific boards and committees



## **VERA WOHLGENANT**

### **AUSTRIA**

#### **GENERAL INFORMATION**

**Address:** Auerbachweg 5, 2201 Gerasdorf

**Telephone:** +43(0)660/349 76 59

**E-mail:** vera.wohlgenannt@gmail.com

#### **WORK EXPERIENCE**

**2020 - Present** Head of the TBI Department Rehabilitationcenter Meidling, Vienna/ Austria

**Since 2017** Forensic Expert of Neurology

**Since 2013** Neurologist in the Rehabilitationcenter Meidling, Vienna/ Austria

**2009- 2013** Neurologist in Kaiser Franz-Josef-Hospital (Head of the Department: Univ. Prof. Dr. Grisold)

#### **SKILLS**

Specialisation in TBI rehabilitation

Neurotraumatology

Expertise in EMG/NCS

Specialization in Nerve- sonography

Forensic Neurotraumatology

#### **MEMBERSHIP**

**Since 2020** Board member of Austrian society of neurorehabilitation (ÖGNR)

**Since 2022** Board member of Austrian forensic expertise society (Gesellschaft der Gutachterärzte)

Österreich)

**Since 2018** Member of Austrian society of medicine ultrasound (ÖGUM)

**Since 2015** Member of Austrian society of neurophysiology (OeGKN)

**Since 2010** Member of Austrian society of neurology (ÖGN)

## EDUCATION

**Since 2018** Expert in Nerve Sonography- (ÖGUM Level 1)

**Since 2017** Forensic Expert of Neurology

**Since 2009** Emergency physician

**2003- 2009** Doctor of Neurology Kaiser Franz-Josef-Hospital, Vienna/Austria

**1994-1999** Doctor of medicine. University Vienna/ Austria

## PUBLICATIONS

1. Guidelines for forensic neuro-psychiatric assessments of patients with Post-COVID-19 symptoms, published in german: Leitlinie zur neurologisch-psychiatrischen Begutachtung von Versicherten mit Post-COVID-Symptomen Wohlgenannt V, Lesky J. et al., AUVA Februar 2023
2. Nerve ultrasound as a helpful method in forensic neurology assessments, published in german: Neurosonographie als ergänzende hilfreiche Zusatzdiagnostik in der gutachterlichen Bewertung von traumatischen Nervenläsionen; Österr. Zeitschrift f. d. ärztliche Gutachten, Heft 5 aus 2017
3. Sonography of peripheral nerves, published in german: Sonografie peripherer Nerven, Wohlgenannt V, Grisold W, Komenda M, Neurologisch 3/13
4. The clinical importance of nerve- and muscle ultrasound, published in german: Die klinische Bedeutung des Ultraschalls von Nerven und Muskeln, Grisold W, Nussgruber V, Wiener Medizinische Wochenschrift Skriptum 1/2010, Springer Verlag
5. Stroke in cancer patients, a risk factor analysis, Oberndorfer S, Nussgruber V, Grisold W; Neurooncol 94 (2):227 (2009)
6. Comments on neurological aspects of taste disorders, Grisold W, Nussgruber V; Arch Neurol 61 (2): 297-8 (2004)

# GENERAL INFORMATION



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## ORGANIZERS

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Academy for  
Multidisciplinary Neurotraumatology  
[www.brain-amn.org](http://www.brain-amn.org)



**UMF**  
UNIVERSITATEA DE  
MEDICINĂ ȘI FARMACIE  
IULIU HAȚIEGANU  
CLUJ-NAPOCA

Iuliu Hațieganu University of Medicine  
and Pharmacy Cluj-Napoca, Romania  
[www.umfcluj.ro](http://www.umfcluj.ro)



**ACADEMIA DE  
ȘTIINȚE  
MEDICALE**  
*Experiență doctă*

Romanian Academy of Medical  
Sciences  
[www.adsm.ro](http://www.adsm.ro)



The Romanian Society  
for NeuroRehabilitation  
[rosnera.org](http://rosnera.org)



**EFNR** The European Federation  
of NeuroRehabilitation Societies

European Federation of  
NeuroRehabilitation Societies  
[www.efnr.org](http://www.efnr.org)



**FOUNDATION OF THE  
SOCIETY FOR THE STUDY OF  
NEUROPROTECTION AND  
NEUROPLASTICITY**

Fundation of the Society for the Study of  
Neuroprotection and Neuroplasticity  
[www.ssm.ro](http://www.ssm.ro)



RoNeuro Institute for Neurological  
Research and Diagnostic  
[www.roneuro.ro](http://www.roneuro.ro)



FUNDATIA JURNALULUI  
**Journal of Medicine  
and Life**

Foundation of the Journal for  
Medicine and Life  
[www.medandlife.org](http://www.medandlife.org)

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## GENERAL INFORMATION

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### LOGISTIC PARTNERS:



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office@global-t.ro



**SYNAPSE**  
T R A V E L

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synapsetravel.ro

#### Scientific Secretariat

The Academy of Multidisciplinary  
Neurotraumatology /  
37 Mircea Eliade Street, 400364,  
Cluj-Napoca, Romania  
Contact : office@brain-amn.org

#### Contact Details

Mrs. Doria Constantinescu  
mobile: +40757096111  
doria@synapsetravel.ro



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## **GENERAL INFORMATION**

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### **LANGUAGE**

The official language is English.  
All communications will be delivered exclusively in English.

### **CHANGES IN PROGRAM**

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

### **FINAL PROGRAM & ABSTRACT BOOK**

Available online

### **TIME**

The program hours are adjusted to Current Local Time in Vienna, Austria, CEST - Central European Summer Time, UTC +2 hours

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## NOTES

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**AMIN** ACADEMY FOR  
MULTIDISCIPLINARY  
NEUROTRAUMATOLOGY



ACADEMY FOR  
MULTIDISCIPLINARY  
NEUROTRAUMATOLOGY

