FOUNDATION OF THE SOCIETY FOR THE STUDY OF NEUROPROTECTION AND NEUROPLASTICITY

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

RoNEURO Institute for Neurological Research and Diagnostic

Romanian Journal of Medicine and Life

AMN ACADEMY FOR MULTIDISCIPLINARY NEUROTRAUMATOLOGY

The European Federation of NeuroRehabilitation Societies

22ND AMN CONGRESS

IN CONJUCTION WITH

THE ROYAL COLLEGE OF NEUROSURGEONS OF THAILAND

THAI COLLEGE OF EMERGENCY PHYSICIANS

THE NEUROLOGICAL SOCIETY OF THAILAND

THE ROYAL COLLEGE OF PSYCHIATRISTS OF THAILAND

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HYBRID EVENT

4 - 5 JULY, 2025
PULLMAN BANGKOK KING POWER
BANGKOK, THAILAND

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SCIENTIFIC PROGRAM

DAY 1, FRIDAY, JULY 4TH, 2025

7:45 – 8:15 **REGISTRATION**

8:15 – 8:30 **WELCOME ADDRESS**

Kullapat Veerasarn (Thailand), Dafin F. Mureșanu (Romania), Johannes Vester (Germany)

8:30 – 9:40 **SESSION 1 - PRESIDENTIAL LECTURE | KEYNOTE LECTURES**

The AMN and its Mission and Vision - How to Transform Traditional into Multidisciplinary Trauma Care with Long-Term Follow-up

Dafin F. Mureșanu (Romania), Johannes Vester (Germany)

The Global Burden of TBI with Special Emphasis on the APC Region

Kullapat Veerasarn (Thailand)

Innovative Concepts in Neurorehabilitation

Volker Hömberg (Germany)

9:40 – 10:00 **COFFEE BREAK**

10:00 – 11:30 **SESSION 2 - PRE-HOSPITAL AND ICU-CARE AFTER TBI**
CHAIRPERSON: Theethawat Sathirarat (Thailand)

Head Trauma in Vietnam - How Improved EMS Responses Correlate with Outcome

Do Ngoc Son (Vietnam)

Road Traffic Accident (RTA) and Head Trauma in Egypt – Clinical Presentation and Prognosis

Bassem Boulos (Egypt)

Guideline Recommendations in Critical Care after TBI

Sombat Muengtaweepongsa (Thailand)

11:30 – 12:00 **SPECIAL KEYNOTE LECTURE**

PHARMACOLOGICAL AND NON-PHARMACOLOGICAL INTERVENTIONS AFTER NEUROTRAUMA

Dafin F. Mureșanu (Romania)

12:00 – 12:30 **SESSION 3 - DEBATE 1 | THE USE OF DECOMPRESSIVE CRANIECTOMY IN NEUROTRAUMA: LIFE-SAVING INTERVENTION OR IS IT TOO AGGRESSIVE?**

CHAIRPERSONS: Doungporn Ruthirago (Thailand), Rovshan Khalilzada (Azerbaijan)

PRO: Guillermo V. Liabres (the Philippines)

Arguments Supporting the Use of Decompressive Craniectomy (DC) in Neurotrauma

CON: Panu Boontoterm (Thailand)

Arguments Against Decompressive Craniectomy (DC) in Neurotrauma

12:30 – 13:45 **LUNCH**

13:45 – 15:10 **SESSION 4 - YOU CAN'T IMPROVE WHAT YOU CANNOT MEASURE - DATA AND QUALITY INDICATORS IN TBI**

CHAIRPERSON: Pradit Chaiyabud (Thailand)

The PRESENT Patient Registry - Objectives and Progress Report

Peter Lackner (Austria)

Thinking like a CEO: the Full Financial & Medical Picture behind Premium Devices & Therapies

Dorel Săndesc (Romania)

An Outcome Expert's Perspective on Essential Cognitive and Psychosocial Outcome Indicators after TBI
Nicole von Steinbüchel (Germany)

Quality Indicators in Neurosurgery
Makhkamjon Makhkamov (Uzbekistan)

Quality Indicators in Post-Traumatic Brain Injury Rehabilitation
Parvin Akbarov (Azerbaijan)

15:10 – 16:00 **SESSION 5 – INTERACTIVE CASE DISCUSSIONS – ACUTE CARE/NEUROSURGERY**
CHAIRPERSONS: Christian Matula (Austria), Do Ngoc Son (Vietnam)

CASE 1 - Severe Brain Trauma with Elevated ICP
Duong Dai Ha (Vietnam)

CASE 2 - Cerebrolysin with Post-Operative Spinal Cord Injury in Intramedullar Cord Tumor Surgery: Case Presentation
Mohammed Eltantawy (Egypt)

CASE 3 - Severe TBI with ASDH and Unexpected Sequelae / Mild TBI with Brain Contusion and Later Alteration of Consciousness
Vich Yindeedej (Thailand)

16:00 – 16:20 **COFFEE BREAK**

16:20 – 17:00 **SESSION 6 – PANEL DISCUSSION 1 – TBI AND HEALTHCARE POLITICS – ONE OF THE LARGEST HEALTHCARE BURDENS GLOBALLY HAS NO POLITICAL LOBBY – HOW CAN IT CHANGE FOR THE BETTER?**
MODERATOR: Dafin F. Mureșanu (Romania)

Lynne Lucena (the Philippines)
Tewajetsada Paruang (Thailand)
Peter Lackner (Austria)
Stefanie Duchac (Germany)

17:00 – 17:30 **SESSION 7 – DEBATE 2 | "THE ROLE OF TARGETED TEMPERATURE MANAGEMENT (TTM) IN TRAUMATIC BRAIN INJURY (TBI): SHOULD IT BE STANDARD PRACTICE?"**

PRO: Dorel Săndesc (Romania)

The Role of Targeted Temperature Management (TTM) in Traumatic Brain Injury (TBI): PRO Position

CON: Agata Andrzejewska (Poland)

The Role of Targeted Temperature Management (TTM) in Traumatic Brain Injury (TBI): CON Position

17:30 – 17:45 **SESSION 8 - ESSENTIAL RATING SCALES IN NEUROTRAUMA PERFORMED BY NURSES**

Ann Thaiudom (Thailand)

DAY 2, SATURDAY JULY 5TH, 2025

08:00 – 08:45 **TRAINING COURSE | ESSENTIAL RATING SCALES IN POST-NEUROTRAUMA COGNITIVE AND PSYCHIATRIC ASSESSMENT INCLUDING PRACTICAL RATING EXERCISES**

SPEAKERS: Wasineenart Mongkolpun (Thailand), Cătălina Crișan (Romania)

08:45 –10:00 **SESSION 9: NEUROSURGICAL MANAGEMENT AFTER TBI**

CHAIRPERSON: Makhkamjon Makhkamov (Uzbekistan)

Change Management in Innovative Neurotrauma Treatment – Roadmap to Increase Success

Christian Matula (Austria)

Functional Surgery for Post-Traumatic Neurological Disorders

Bunpot Sitthinamsuwan (Thailand)

Surgical Treatment of Spinal Cord Injuries

Rovshan Khalilzada (Azerbaijan)

10:00 – 10:20 **COFFEE BREAK**

10:20 – 12:20 **SESSION 10 – GUIDELINE & RECOMMENDATION THROUGH THE PHASES OF TBI PATIENT CARE AND DISCUSSIONS**
CHAIRPERSONS: Volker Hömberg (Germany),
Alexandru V. Ciurea (Romania)

Pharmacological Options after Brain Injuries
Volker Hömberg (Germany)

Guidelines and Recommendations for Severe TBI Patient Care in the ICU
Lynne Lucena (the Philippines)

Guidelines in Surgical/non-Surgical Treatment – When TO Operate and when NOT TO Operate?
Dong Young Cho (South Korea)

Goal-Setting and Long-Term Prognosis – Essential Elements of the Rehabilitation Process
Dana Boering (Germany)

Guideline Recommendations in Post-TBI Rehabilitation: Bridging Evidence to Real-World Practice
Parit Wongphaet (Thailand)

12:00 – 12:20 **DISCUSSIONS**

12:20 – 13:00 **SESSION 11 – PANEL DISCUSSION 2 | AMN CHARTER INITIATIVE & AMN AS A GLOBALLY IMPACTFUL MEDICAL SOCIETY – WHAT ARE YOUR EXPECTATIONS?**
CHAIRPERSONS: Kullapat Veerasarn (Thailand),
Johannes Vester (Germany),
Dafin F. Mureșanu (Romania)

Participants: Delegates from participant countries

13:00 – 14:00 **LUNCH**

14:00 – 15:20 **SESSION 12 - NEUROTRAUMA REHABILITATION - PATIENT MANAGEMENT AND POST-TRAUMATIC COMPLICATIONS**
CHAIRPERSON: Krishnapundha Bunyaratavej (Thailand)

Essential Elements of Pain Management in Neurorehabilitation
Witsanu Kumthornthip (Thailand)

Neuropharmacology in Traumatic Brain Injury:
Addressing Cognitive and Behavioural Dysfunctions
Daruj Aniwattanapong (Thailand)

Spasticity Prevention Management
Kollatee Buranarach (Thailand)

Dysphagia after TBI – A Multifactorial Mosaic of Function, Cognition and Control
Stefanie Duchac (Germany)

15:20 – 15:40 **COFFEE BREAK**

15:40 – 16:40 **SESSION 13 - RESEARCH IN TRAUMATIC BRAIN INJURY**
CHAIRPERSON: Theerapol Wittiwej (Thailand)

Essential Biometric Principles in Neurotrauma Research
Johannes Vester (Germany)

Neuroendocrine Dysfunction Following Traumatic Brain Injury:
Pathophysiology, Diagnosis, and Clinical Implications
Jung Ook Kim (South Korea)

16:40 – 17:00 **SESSION 14 - FREE PAPER (SELECTED FROM GENERAL PAPER SUBMISSION)**
CHAIRPERSON: Siraruj Sakoolnamarka (Thailand)

Participants: Siraphop Krongchai, Danutanut Tubngern, Napat Ekkanan, Thitipat Sornkaew, Nitchapat Towattananon (Thailand)

17:00 – 17:15 **CLOSING AND PICTURES**

ABSTRACTS

THE ROLE OF TARGETED TEMPERATURE MANAGEMENT (TTM) IN TRAUMATIC BRAIN INJURY (TBI): CON POSITION

AGATA ANDRZEJEWSKA
Chief of Anesthesiology Department, Clinical Hospital in Szczecin, Poland

TTM lacks consistent high-quality evidence for improving long-term outcomes in TBI, carries significant risks, and should not be standard practice outside rigorous clinical trials.

Key Arguments:

We need a clear definition of TTM – avoiding hyperthermia and fever, keeping normothermia at all cost or therapeutic hypothermia. Which and when is advised is still not clear enough. No consensus was reached on specific temperature range to target. A lot of data regarding hypothermia are from trials concerning post resuscitation care in patients who suffered cardiac arrest.

Guidelines mostly are based on expert opinion or modified Deplhi consensus which means that we do not have strong evidence, high quality RCT showing improvement when using TTM.

Temperature measurement: We don't have enough strong data or trials comparing and showing how to best measure the temperature – in the brain or the deep temperature (esophageal, bladder) and what is the real goal of lowering temperature.

Benefits vs Harm: Some trials (e.g., Eurotherm3235) showed no functional improvement and potential harm. TTM remains associated with pneumonia, coagulopathy, and arrhythmias, though recent protocols reduce their frequency. Moreover, hypothermia can affect neurological exams, mask infection or the beginning of sepsis, delaying critical interventions. While some subgroups may benefit from TTM when considering mortality or disability reduction, broad applications still necessitate more evidence.

Lack of Protocol Standardization: Optimal depth, duration, and rewarming rates remain unclear, leading to inconsistent results across studies.

Resource-intensive: Requires specialized equipment/staff, impractical in many settings.

We need to better follow guidelines and basics that we already have and know, before jumping to newer technologies, with which we do not have much experience and proof.

Conclusion: Despite strong preclinical evidence, clinical trials show inconsistent outcome benefits. As we know correlation is not always causation. We need more high quality trials confirming benefits and safety of TTM and before that we should put more focus on implementing basics from BTF and SIBICC into our clinical practice

QUALITY INDICATORS IN POST-TRAUMATIC BRAIN INJURY REHABILITATION

PARVIN AKBAROV
Advisor to the Executive Director of TABIB (Administration of Regional Medical Divisions), Baku, Azerbaijan

Traumatic Brain Injury (TBI) is one of the leading causes of disability worldwide, frequently resulting in complex and long-term impairments across motor, cognitive, emotional, and behavioral domains. To ensure optimal recovery and organize medical care more efficiently, the use of measurable quality indicators throughout the rehabilitation process is essential. This presentation introduces an evidence-based framework for identifying and implementing such indicators across all phases of rehabilitation from initial emergency care and intensive care to inpatient neurorehabilitation and community reintegration.

Drawing on international clinical guidelines and real-world experience from multidisciplinary centers, the presentation emphasizes the importance of early rehabilitation interventions, the use of standardized outcome measurement tools, and the integration of technology to enhance clinical outcomes. Team-based coordination, continuity of care, and active patient engagement remain central to achieving rehabilitation success.

Key quality-focused approaches are addressed in occupational therapy, neuropsychological support, speech and swallowing rehabilitation, and the management of emotional and behavioral issues. The presentation also analyzes current system-level challenges such as inconsistent application of indicators across centers, limited long-term follow-up, and delayed adoption of modern technologies and proposes strategic directions for future development.

Ultimately, this presentation positions quality indicators not only as instruments of clinical monitoring and accountability but also as strategic tools for building an innovative, transparent, and patient-centered model of post-TBI rehabilitation.

NEUROPHARMACOLOGY IN TRAUMATIC BRAIN INJURY: ADDRESSING COGNITIVE AND BEHAVIOURAL DYSFUNCTIONS

DARUJ ANIWATTANAPONG
Section of Cognitive Neuropsychiatry, Institute of Psychiatry Psychology & Neuroscience, King's College London (KCL), London, United Kingdom

Traumatic brain injury (TBI) often leads to persistent cognitive deficits and behavioural disturbances, substantially impacting patients' recovery and quality of life. Neuropharmacological interventions offer targeted strategies to ameliorate these

impairments, yet clinical practice remains challenged by the heterogeneity of injury and patient response.

This presentation will begin with an overview of mechanisms of neuropsychiatric disturbances including neuroanatomy and neurotransmitter system disruptions following TBI, focusing on dopaminergic, cholinergic, and glutamatergic pathways. Building on this neurobiological foundation, evidence-based pharmacologic treatments for cognitive dysfunction will be reviewed, including the use of dopaminergic agonists (amantadine, methylphenidate) to enhance arousal, attention, and executive functions, and cholinesterase inhibitors (donepezil, rivastigmine) for memory support.

Behavioural disturbances such as depression, anxiety, irritability, and aggression are frequent in TBI survivors. Pharmacologic approaches will be discussed, highlighting the roles of SSRIs/SNRIs for mood symptoms, mood stabilisers for impulsivity and aggression, and cautious use of antipsychotics in cases of severe agitation. Clinical trials regarding medication selection, dosing, monitoring, and the timing of interventions will be emphasised.

The talk will also address the major challenges in TBI neuropharmacology: injury variability, co-existing psychiatric disorders, adverse effect management, and functional outcome prioritisation. Emerging directions, such as biomarker-guided therapy, anti-inflammatory pharmacologic targets, and integration with neuromodulation, and rehabilitation, will be briefly introduced.

Through a pragmatic, evidence-informed lens, this session aims to equip clinicians with practical strategies to optimise pharmacologic management of cognitive and behavioural problems after TBI, ultimately promoting greater functional recovery and patient-centered care.

GOAL SETTING AND LONG-TERM PROGNOSIS-ESSENTIAL ELEMENTS OF THE REHABILITATION PROCESS

DANA BOERING
Secretary General of the European Federation for Neurorehabilitation Societies

Traumatic brain injury (TBI) has the highest incidence of all common neurological disorders and is increasingly shown as both an acute and chronic healthcare issue. Approximately 50 million people around the world have a TBI each year, and the costs of TBI care are, globally, around 400 billion USD.

Rehabilitation is an essential component in the management chain of TBI - as high intensity multimodal inpatient rehab programs or consecutive outpatient multimodal programs.

The talk will shortly outline the elements of TBI neurorehabilitation, emphasizing the goal setting and monitoring processes as essential components, with a special focus on the principles and theories of goal getting, its specific aspects in TBI patients, its mainly used instruments.

A further considered issue in the talk will be to outline the predictors of long-term outcomes after moderate to severe TBI (clinical assessment tools, neuroimaging, surrogate TBI biomarkers, predictive models like CRASH or IMPACT) with a special focus on the increasing role of artificial intelligence (AI) in the refinement of TBI diagnostic tools, prognostic modeling and rehabilitation programs:

Machine learning algorithms will increase, complementary to the currently used predictive models, our capacity to make more accurate predictions not only towards mortality and unfavorable outcomes but also towards predicting patient's functionality at discharge.

Furthermore, AI generated and guided goal self-monitoring and therapy tools are already enhancing our possibilities on the long term, lifelong journey of patients after TBI.

ARGUMENTS AGAINST DECOMPRESSIVE CRANIECTOMY (DC) IN NEUROTRAUMA

PANU BOONTOTERM
Division of Neurological Surgery Unit, Department of Surgery and Division of Critical Care Medicine, Department of Medicine, Phramongkutklao Hospital, Bangkok, Thailand

The use of decompressive craniectomy (DC) should be carefully considered on a case-by-case basis, with attention to the patient's overall prognosis, the potential for recovery, and the risks of long-term disability. While it can be life-saving, it is crucial that it is not viewed as a cure-all, but as a tool to manage acute intracranial hypertension. Ultimately, the decision to proceed with DC should be made collaboratively by the medical team, the patient's family, and in accordance with the patient's wishes and prognosis. This makes it evident that DC is a life-saving intervention in some situations.

1. **Risk of Severe Long-Term Disabilities:** In many cases, patients who undergo DC can still suffer from significant motor and cognitive disabilities, including paralysis, speech deficits, and long-term dependency.
2. **Failure to Improve Functional Outcomes:** Research has indicated that the procedure may lead to an improvement in survival but not necessarily in functional recovery.
3. **Complications and Adverse Effects:** Post-operative complications, such as the

development of, herniation of brain tissue through the opening, and other sequelae, are not uncommon.

4. **Increased Risk of Postoperative Sequelae:** One common consequence is the risk of cerebral edema (swelling of the brain), which can exacerbate brain injury and lead to secondary damage after surgery. In addition, the absence of a skull piece can result in a lack of structural support for the brain, which may affect normal brain function and potentially lead to conditions like pseudotumor cerebri.
5. **The Ethical Dilemma of Aggressive Intervention:** This raises concerns about whether the aggressive use of DC in severely injured patients is truly in the best interests of the patient or merely prolonging the inevitable.
6. **Lack of Consensus on Indications:** There is a lack of universal agreement on when decompressive craniectomy should be performed, making the procedure somewhat controversial.
7. **Economic and Resource Burden:** Prolonged hospital stays, the need for long-term rehabilitation, and ongoing medical care can place a substantial economic burden on healthcare systems. When factoring in the costs and the potential for long-term disability, some argue that this intervention may not be the best use of resources, particularly in healthcare systems with limited access to high-level care.

Conclusion

Ultimately, the decision to proceed with DC should be made collaboratively by the medical team, the patient's family, and in accordance with the patient's wishes and prognosis.

ROAD TRAFFIC ACCIDENT (RTA) AND HEAD TRAUMA IN EGYPT – CLINICAL PRESENTATION AND PROGNOSIS

BASSEM BOULOS SAAD

Professor of Anaesthesia and Intensive Care, Ain Shams University, Cairo, Egypt

Aim: To evaluate the clinical presentation and outcomes of patients with road traffic accidents (RTA) and head trauma (HT) from other causes upon admission to the hospital in Greater Cairo between November 1, 2021 and January 12, 2023.

Methods: The retrospective observational study analyzed data from patient files. A total of 81 patients were screened, with 59 meeting the inclusion/exclusion criteria. Among these, 10 patients were under 18 years old and 49 were adults. Adults received 30 ml/day of Cerebrolysin®, while children were dosed based on physician recommendations. Assessment at admission included Glasgow Coma Scale (GCS) scores and the presence of post-Concussion (PC) or intracranial (IC) hemorrhage. Prognosis was evaluated based on ICU stay duration and patient status at the end of the observation period.

Results: Of the patients, 38 (64.4%) had mild cases, and 21 (35.6%) had moderate to severe cases, with no significant age difference between those under 18 ($p = 0.490$). and

over 18 (p = 0.209). While head trauma and RTA incidents were more frequent among males across all age groups, there was no significant gender difference in the severity of cases for those under 18 (p = 0.524). and over 18 years (p = 0.363). Most patients, 57 (96.6%), fully recovered. One patient (1.7%) died following an RTA with a GCS score of 7, and another (1.7%) remained in the ICU after 14 days, with a GCS score of 11, suffering from brain contusion, and edema.

Conclusion: Head injury, whether from RTA or other trauma, were more prevalent among young adults and males in the Greater Cairo region. Cerebrolysin® administration improved the prognosis for patients with head trauma and RTA.

Keywords: Cerebrolysin®; RTA; Head Trauma; GCS Score; Prognosis

Abbreviations: Adverse Event (AE), Brain Trauma Foundation (BTF), Central Nervous System (CNS), Contract Research Organization (CRO), Diabetic Peripheral Neuropathy (DPN), Glasgow Coma Scale (GCS), Head Injury (HI), Intracranial (IC), Low- and Middle-Income Countries (LMICs), Post-Concussion (PC), Road Traffic Accident (RTA), Statistical Analysis Plan (SAP), Serious Adverse Event (SAE), Standard Deviation (SD), Traumatic Brain Injury (TBI), Traumatic Head Injury (THI).

SPASTICITY PREVENTION AND MANAGEMENT

KOLLATEE BURANARACH
Physical medicine and rehabilitation doctor at Phramongkutklao Hospital, Bangkok, Thailand

Spasticity is a common complication of upper motor neuron (UMN) lesions found in neurosurgical practice, including stroke, traumatic brain injury, spinal cord injury, and brain tumors. It is defined as a velocity-dependent increase in muscle tone caused by exaggerated stretch reflexes, which frequently leads to impaired function, pain, hygiene difficulties, and long-term musculoskeletal complications.

This lecture provides a clinically relevant overview of spasticity. It begins with a brief overview of the neurophysiology of muscle tone and the mechanisms that cause spasticity, emphasizing the significance of disinhibition in descending pathways and spinal reflex hyperactivity. The session focuses on practical clinical assessment using tools like the Modified Ashworth Scale and Tardieu Scale, as well as functional evaluation to determine the real-life effect on patients.

Management strategies are presented in a structured approach, beginning with the detection and treatment of aggravating factors such as infection, noxious stimuli, and positioning issues. Physical therapy interventions (e.g., stretching, strengthening, and positioning), physical modalities (e.g., heat, cold, TENS), and orthotic support are among the most important non-invasive treatments in early and long-term care.

Pharmacologic interventions such as oral antispasticity agents (e.g., baclofen, tizanidine) are briefly discussed, along with important considerations for neurosurgical patients, such as interactions with seizure threshold, renal/hepatic function, and consciousness level. Botulinum toxin injections and nerve blocks are introduced as precise, effective treatments for specific muscle groups.

Lastly, the lecture outlines when advanced interventions like intrathecal baclofen pump implantation or selective dorsal rhizotomy should be considered, emphasizing the importance of goal setting and multidisciplinary collaboration among neurosurgeons, physiatrists, and rehabilitation teams.

This session aims to provide neurosurgeons with a basic understanding of spasticity management in order to improve perioperative care, postoperative recovery, and long-term quality of life for patients with neurological injuries.

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

DONG YOUNG CHO
Department of Neurosurgery, Ewha Womans University Seoul Hospital, College of Medicine, Seoul, South Korea

Traumatic brain injury (TBI) represents a highly heterogeneous condition, ranging from mild concussion to life-threatening brain injury. Optimal management requires timely, evidence-based decisions regarding when to pursue surgical intervention and when to adopt conservative management. This presentation outlines key recommendations from the Brain Trauma Foundation and AANS/CNS guidelines, with practical insights into real-world application. Surgical indications are reviewed across common lesion types: epidural hematoma (EDH), acute subdural hematoma (SDH), cerebral contusions, and scenarios requiring decompressive craniectomy (DC). The pivotal findings of the DECRA and RESCUEicp trials are discussed, highlighting the complex trade-offs between survival and functional outcomes when employing DC. In addition, special considerations in elderly patients, those on anticoagulation, and pediatric populations are addressed, recognizing that surgical thresholds may vary. The presentation emphasizes patient-centered decision-making, informed consent, and dynamic reassessment of treatment strategies as patient conditions evolve. Ultimately, the goal is to support neurosurgeons in applying current guidelines judiciously while tailoring interventions to optimize outcomes for individual patients.

ESSENTIAL RATING SCALES IN POST-NEUROTRAUMA COGNITIVE AND PSYCHIATRIC ASSESSMENT INCLUDING PRACTICAL RATING SCALES

CĂTĂLINA CRIȘAN
Department of Neurosciences, Discipline of Psychiatry and Pediatric Psychiatry, Iuliu Hațieganu University of Medicine and Pharmacy, Romania

Neuropsychological and psychiatric disorders represent a major concern and cause of disabilities after trauma, contributing to worse recovery after traumatic brain injury (TBI).

The aim of this presentation is to outline the most common scales and inventories used to assess and diagnose depression, anxiety, posttraumatic stress disorder and cognitive function after TBI.

Regarding emotional and psychiatric symptoms, NPI (Neuropsychiatric Inventory), BDI (Beck Depression Inventory-II, HASD (Hospital Anxiety and Depression Scale) and PTSD Checklist for DSM-5 are the most representative scales. For behavioural and personality changes the following are used: FrSBe (Frontal Systems Behavior Scale), OAS (Overt Aggression Scale), BIS-11 (Barratt Impulsiveness Scale). Functionality and quality of life are assessed with DRS (Disability Rating Scale), FIM (Functional Independence Measure) and QOLIBRI (Quality of Life after Brain Injury). Social Cognition and Executive Function are commonly evaluated with BRIEF-A (Behavior Rating Inventory of Executive Function) and Wisconsin Card Sorting Test. For the cognitive dysfunction, MoCA, MMSE and Glasgow scale frequently used by the clinicians.

All these scales can enable clinicians to predict early cognitive impairments and to diagnose psychiatric disorders after TBI and plan cognitive and psychological rehabilitation earlier in the recovery process.

DYSPHAGIA AFTER TBI – A MULTIFACTORIAL MOSAIC OF FUNCTION, COGNITION AND CONTROL

STEFANIE DUCHAC
Professor of Speech and Language Therapy at SRH University, Germany

Dysphagia following traumatic brain injury (TBI) represents a clinically significant and highly heterogeneous disorder. Beyond structural brainstem or cortical damage, post-TBI dysphagia is shaped by an intricate interplay of motor, sensory, cognitive, and behavioral factors. The disruption of central swallowing control, impairments in peripheral feedback mechanisms, and deficits in executive functions contribute to

a multifactorial syndrome that demands a comprehensive diagnostic and therapeutic approach.

What makes the assessment and treatment of dysphagia after TBI particularly challenging is the dynamic, often fluctuating nature of symptoms in relation to arousal, attention, and cognitive load. Unlike dysphagia of purely structural origin, patients with TBI may present with intact motor execution but severely impaired initiation, safety awareness, or self-regulation. This requires diagnostic procedures to go beyond mere observation of physiology and include evaluations of cognitive-linguistic function, behavioral control, and endurance.

Effective intervention depends on a deep understanding of the swallowing function as a sensorimotor process, as well as the influence of cognition, fatigue, medication, and environmental factors. Treatment planning must integrate neurorehabilitative strategies with behavioral management, cognitive support, and interdisciplinary coordination. Traditional compensatory techniques may need to be adapted to the patient's cognitive profile, while stimulation-based and skill-training interventions require careful timing, individualization, and support for generalization into everyday contexts.

In summary, managing dysphagia after TBI calls for a nuanced perspective that acknowledges the complex interaction of neural control, function, and context-ensuring that therapy not only addresses physiology, but also empowers patients to regain safe and meaningful oral intake.

CASE PRESENTATION: SEVERE BRAIN TRAUMA WITH ELEVATED ICP

DAI HA DUONG
Neurosurgeon, Viet Duc University Hospital, Hanoi, Vietnam
Lecturer, Hanoi Medical University, Hanoi, Vietnam

This case presentation highlights two illustrative examples of traumatic brain injury (TBI) management in Vietnam, reflecting the complexity and heterogeneity of clinical decision-making in neurotrauma care. The first case involves a 71-year-old male with a history of hypertension, diabetes, and prior myocardial infarction. He sustained a fall at home with an initially mild clinical presentation (GCS 14). However, neurological deterioration occurred within hours, and subsequent imaging revealed an expanding epidural hematoma. The patient underwent urgent surgical evacuation and decompressive craniectomy, with favorable recovery. The second case describes a 25-year-old male following a severe road traffic accident. He initially underwent emergency decompressive hemicraniectomy at a provincial hospital but developed progressive bilateral intracranial lesions requiring multiple reoperations, prolonged mechanical ventilation, and intensive neurocritical care. Upon referral to our center, he presented with a GCS of 5 and signs of raised intracranial pressure. Following further

surgical intervention and multidisciplinary management, his condition stabilized, and he achieved partial neurological recovery (GCS 12) by discharge. This cases underscore the dynamic nature of TBI progression and the need for timely imaging, individualized surgical judgment, and coordinated care across institutions. A flexible, case-based application of guidelines - incorporating patient comorbidities, anatomical considerations, and available resources - is essential to improving outcomes in TBI care.

EFFECTS OF HYPEROXIA IN HIGH-RISK POSTOPERATIVE SURGICAL PATIENTS USING OXYGEN RESERVE INDEX

NAPAT EKKANAN
General surgeon, Pua Crowd Prince Hospital, Nan, Thailand

Administering oxygen is a common treatment given during and after surgery with the aim of preventing hypoxia. However, excessive oxygen can lead to hyperoxia, a condition that is associated with various complications.

Although pulse oximetry is currently used to continuously monitor oxygen levels, measuring the oxygen concentration is limited to a maximum value of SpO2 100%. To assess a hyperoxic state, it is necessary to interpret the PaO2 from arterial blood gas analysis. The Oxygen Reserve Index (ORI) is an index that helps evaluate hyperoxia continuously and non-invasively.

Excessive oxygen administration can lead to inflammation of the respiratory system, known as Hyperoxic Acute Lung Injury, especially when oxygen concentration exceeds 0.7 for more than 24 hours. Additionally, high oxygen concentrations affect various systems, such as the respiratory system, leading to atelectasis and increased intrapulmonary shunts. In the cardiovascular system, this condition reduces cardiac output due to a decrease in heart rate and causes peripheral vasoconstriction, resulting in myocardial ischemia post-surgery, and it has also been observed that blood flow to the brain decreases.

The severity of hyperoxia can be categorized into three levels: mild (PaO2 100-199 mmHg), moderate (PaO2 200-299 mmHg), and severe (PaO2 > 300 mmHg), with an ORI value indicating mild hyperoxia at 0-1. Therefore, measuring ORI is currently a good non-invasive method for evaluating a hyperoxic state.

This study will examine the effects on patients experiencing hyperoxia from excessive oxygen administration, including the duration of hyperoxia, the length of stay in the intensive care unit, and the 30-day mortality rate, to provide guidance for adjusting oxygen therapy post-surgery in the future.

The results showed that 57% of the volunteers were in the hyperoxic group, with an

average exposure time to hyperoxia of 55% of the study duration, yielding an average ORi of 0.41.

CEREBROLYSIN WITH POST-OPERATIVE SPINAL CORD INJURY, IN INTRAMEDULLARY CORD TUMOR SURGERY

MOHAMMED ELTANTAWY
Professor of Neurosurgery, Department of Neurosurgery, Faculty of Medicine, Benha University, Benha, Egypt

Case presentation: In this study I am presenting my experience in a unique, very rare, intramedullary spinal cord malignant neoplasm that underwent microscopic resection under full electrophysiological monitoring and microscopic dissection, although unfortunately the patient recovered from surgery with profound weakness that was not present prior to surgery.

In addition to the usual post-operative management protocol, I started from day zero full therapeutic dose of cerebrolysin (30 ml) every day for two weeks. Then maintenance dose of 5 mililiters for two months.

The patient showed very good recovery in his motor power by the end of the second month.

In conclusion, Cerebrolysin may play a role in early neuronal recovery that is needed in patients with postoperative intramedullary spinal cord tumor surgery.

PHARMACOLOGICAL OPTIONS AFTER BRAIN INJURIES

VOLKER HÖMBERG
WFNR President

Beside the use of training techniques and other behavioral interventions neurological rehabilitation might be augmented significantly by the use of pharmacological agents: along with the necessary pharmacological treatments for risk factors such as hypertension and hyperlipidemia and secondary prevention, drugs can also be used to facilitate brain recovery and reduce the level of impairment.

On the other hand, certain drugs have to be avoided because they are known to impair brain repair mechanism.

This lecture will address the following issues:

1. A general pharmacological survey of substances impairing or facilitating brain

recovery in animal experimentation is provided.

2. It is of critical importance to avoid so called "detrimental" drugs defined from animal experimental as well as from clinical catamnestic studies to interfere with brain plasticity. In contrast amphetamines L-dopa, reboxetin, and antidepressants may facilitate the effect of rehabilitative techniques.
3. The impact of the use of antidepressant drugs for brain recovery (SSRIs) in non depressed patient after stroke is exemplified by data from FLAME, TALOS and FOCUS and the Ecass trial on effects on nonfluent apasia is demonstrated.
4. A survey of the current status of drugs to influence impairment and function after with a special emphasis on multimodal action drugs especially cerebrolysin in combination with neurorehab training is given.

Suggested reading

Volker Hömberg
Pharmacological aspects of neurorehabilitation
DOI http://dx.doi.org/10.1055/s-0043-116338 Neurology International Open 2017; 1: E247–E255 © Georg Thieme Verlag KG Stuttgart · New York ISSN 2511-1795

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INNOVATIVE CONCEPTS IN NEUROREHABILITATION

VOLKER HÖMBERG
WFNR President

The purpose of this talk is to raise the appetite for intellectual reflections on the growing number of innovative concepts in neurorehabilitation after stroke and TBI.

I will start with addressing the unsolved issues of how much treatment should be given and when to start treatments. Why is the recovery dynamic different between e.g. stroke and TBI.

Technological options as the use of Brain Computer interfaces and VR/AR training concepts are critically discussed.

The use of modern communication technology now offers the chance for low threshold roll out of techniques and procedures to clinicians, caregivers and patients with the ability to reach hundreds of millions of patients especially in LMI countries which lack the access to "classic" rehabilitation services.

Finally, I will address the chances and risks of using artificial intelligence in the planning and monitoring of neurorehabilitation as well as in the creation of new concepts.

SURGICAL TREATMENT OF SPINAL CORD INJURIES

ROVSHAN KHALILZADA
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Spine injuries represent a significant public health concern in Azerbaijan, with rising incidence due to increasing motor vehicle accidents, occupational hazards, falls, and sports-related trauma. The country's transitional health system, coupled with limited trauma care infrastructure in rural areas, poses challenges for the timely diagnosis and management of spinal injuries. Most cases are seen in young males, particularly in urban centers such as Baku, where road traffic accidents remain a leading cause.

Healthcare services for spinal trauma in Azerbaijan are concentrated in major cities, with limited access to specialized care in peripheral regions. Delays in transportation, diagnosis, and surgical intervention often lead to poor outcomes, including permanent neurological deficits. While the Ministry of Health has made efforts to modernize neurosurgical and orthopedic care, there remains a disparity in access to advanced imaging, spinal implants, and rehabilitation services.

The primary treatment modalities include conservative management for minor injuries and surgical stabilization for severe or unstable fractures. However, early rehabilitation is frequently delayed due to inadequate facilities and a shortage of trained physical therapists and rehabilitation specialists. This hinders optimal recovery and social reintegration for many patients.

Data collection and epidemiological studies on spinal injuries are currently limited, making it difficult to assess the full scope and trends of spinal trauma across the country. There is a growing need for a national spine injury registry and public health campaigns focused on injury prevention, particularly related to traffic safety and workplace regulations.

Improving outcomes for spine injury patients in Azerbaijan will require a multi-sectoral approach, including investment in trauma systems, specialized training for healthcare providers, improved access to rehabilitation, and robust public health strategies.

Strengthening emergency response networks and decentralizing specialized care can play a vital role in reducing the burden of spinal injuries nationwide.

NEUROENDOCRINE DYSFUNCTION FOLLOWING TRAUMATIC BRAIN INJURY: PATHOPHYSIOLOGY, DIAGNOSIS, AND CLINICAL IMPLICATIONS

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Traumatic brain injury (TBI) is increasingly recognized as an important cause of hypopituitarism, affecting both acute and chronic clinical outcomes. Neuroendocrine dysfunction after TBI arises from complex pathophysiological mechanisms, including mechanical disruption of the hypothalamic-pituitary axis, ischemia, vascular injury to long portal vessels, neuroinflammation, and autoimmune responses. The prevalence of pituitary dysfunction varies widely depending on injury severity, timing of assessment, and diagnostic criteria, but meta-analyses report that up to 30–40% of patients develop at least one pituitary axis deficiency, with growth hormone deficiency being the most frequent. In the acute phase, prompt recognition of adrenocorticotropic hormone (ACTH) deficiency and arginine vasopressin (AVP) dysfunction is critical for survival, whereas other hormonal abnormalities often evolve dynamically during the subacute and chronic phases. Recent studies also highlight the potential role of biomarkers such as neurofilament light chain (NFL), microRNAs, and anti-pituitary antibodies in predicting long-term pituitary dysfunction. While routine screening protocols have been proposed, standardized guidelines remain under debate, particularly for mild TBI. Moreover, emerging evidence suggests that glucocorticoid receptor (GR) signaling and neuroinflammatory cascades may play central roles in mediating long-term neuroendocrine sequelae. Optimizing screening, follow-up, and individualized hormone replacement strategies is essential to improve functional recovery, quality of life, and rehabilitation outcomes in TBI survivors.

IMPACT OF PERAMPANEL FOR FIRST-EPISODE SEIZURES VERSUS USUAL CARE ON CLINICAL OUTCOME AND SAFETY PROFILE ASPECTS OF THE THAI EXPERIENCE

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Background and purpose: Epilepsy increases poor outcomes in patients with post-traumatic brain injury and brain tumor-related epilepsy, for whom early seizure control is essential. Perampanel (PER) was a known third-generation antiepileptic drug for treatment

all types of seizures. The objective of the study is to compare clinical outcomes and safety of PER administration as monotherapy.

Methods: A prospective study of all 84 patients assigned to PER monotherapy (PER group, n=36) and other first-line antiepileptic drugs (n=48). Clinical outcomes parameters were measured by the prevalence of patients with a diminish in seizure frequency at 50% in 28 days. From November 1, 2020 to April 30, 2024, comparing the PER group with usual care. Clinical outcomes included adherence rate and seizure-free proportion at 28 days and 6 months. Adverse drug reactions were recorded in both groups.

Results: There was no difference in demographic data and incidence of adverse drug reactions between two groups. Median PER dosage was 4 mg (range, 2-12 mg). Compared to other antiepileptic drugs, the PER group had a prevalence of 50% responder rate at 28 days and 6 months significantly were 75%, 81%, 65%, and 51% respectively. Common adverse drug reactions were somnolence and dizziness.

This study found that an incremental titration of PER dosage might be effective and useful in the elderly group by increasing the dosage by 2 mg daily every 4 weeks. The strategy of initiating a minimized PER dose of 2 mg per day for elderly seizure patients, with a gradual increase in dosage every 2 weeks, would be reasonable in clinical practice. Moreover, PER administration as suspension form is available, a consideration for future clinical practice guideline to titrate PER dosage by 1 mg per day in every 2 weeks would likely improve patients' tolerability to treatment-emergent adverse events. The strategy of administering PER monotherapy with a low initiating dosage and a gradual titration dosage would encourage a decrease in adverse events, improve patients' compliance, and increase their adherence rates. PER monotherapy is prescribed once daily at bedtime due to its long half-life, which demonstrates its usefulness in increasing patient retention rates and is important for seizure patients who miss a daily dose. The antiepileptic drug options are recommended for elderly patients due to results showing a safety profile that is not different from other antiepileptic drugs.

Conclusions: PER administration as monotherapy demonstrated good efficacy and less adverse drug reactions. Low dosages helped to decrease adverse drug reactions and improved retention rate.

THE PRESENT PATIENT REGISTRY - OBJECTIVES AND PROGRESS REPORT

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 instrument's main purpose is the collection of quality indicators associated with TBI in order to provide valuable information for enhancing healthcare delivery and gaining a deeper understanding of brain injury as a whole at 4 different domains: Critical Care/ Anesthesiology, Neurosurgery, Neurology and Rehabilitation. This transversal approach follows the patient pathway from pre-hospital to outpatient care. The mission is to provide easy, universal access to an open registry for institutions all over the world, which allows them to measure important quality indicators for TBI for their own institution and set it into context to other institutions' performance. This should ultimately lead to an improved understanding of patient pathways, and neuro-rehabilitation best practice after TBI on an international basis. International 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.

ARGUMENTS SUPPORTING THE USE OF DECOMPRESSIVE CRANIECTOMY (DC) IN NEUROTRAUMA

GUILLERMO V. LIABRES
Cerebrovascular Neurosurgeon, Makati Medical Center, Makati City, the Philippines

This session will cover debate regarding pros and cons of performance of decompressive craniectomy for neurotrauma patients. I will be discussing the "pro" side of the topic regarding this matter and will present through best literature available as well as my personal experiences regarding this matter.

GUIDELINES AND RECOMMENDATIONS FOR SEVERE TBI PATIENT CARE IN THE ICU

LYNNE LOURDES LUCENA
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ICU care for severe traumatic brain injury (TBI) patients focuses on minimizing secondary brain injury by managing intracranial pressure (ICP), ensuring adequate cerebral perfusion pressure (CPP), maintaining oxygenation and ventilation, and addressing other complications. This involves a combination of general intensive care support and specialized neurocritical care interventions.

There have been many guidelines for the management of severe TBI that were published and this lecture will highlight some of them.

QUALITY INDICATORS IN NEUROSURGERY

MAKHKAMJON MAKHKAMOV
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Background: In recent years, the emphasis on quality of care and outcome measurement has grown significantly within neurosurgery. Quality indicators (QIs) serve as standardized tools to assess, monitor, and improve the performance of neurosurgical departments and individual surgeons. They facilitate accountability, guide clinical decision-making, and promote evidence-based practice.

Objective: This abstract aims to provide a comprehensive overview of the key quality indicators relevant to neurosurgical practice, highlighting their importance in optimizing patient outcomes, enhancing safety, and ensuring cost-effectiveness within healthcare systems.

Methods: A systematic review of peer-reviewed literature, clinical guidelines from neurosurgical associations (e.g., AANS, EANS, WFNS), and institutional quality metrics was conducted. Indicators were categorized into structural, process, and outcome measures. Emphasis was placed on measurable, actionable, and risk-adjusted parameters applicable across various neurosurgical subspecialties including neuro-oncology, spine surgery, vascular neurosurgery, and trauma.

Results: Core quality indicators in neurosurgery include perioperative mortality rate, surgical site infection rate, unplanned reoperation within 30 days, readmission rate, duration of hospital stay, and neurological functional outcomes. Specific indicators such as extent of tumor resection (for gliomas), shunt failure rates (in hydrocephalus), and Glasgow Outcome Scale (in neurotrauma) are widely used in specialized settings. Additionally, compliance with clinical protocols (e.g., DVT prophylaxis, antibiotic stewardship), use of intraoperative neuromonitoring, and adoption of minimally invasive techniques are emerging as important QIs. Patient-reported outcomes (PROs) and quality of life assessments are gaining recognition as patient-centered metrics.

Despite their utility, the implementation of QIs in neurosurgery faces challenges including variability in case complexity, institutional resources, and data standardization. Risk adjustment and benchmarking are essential for meaningful interpretation of outcomes. The integration of QIs into national databases and quality registries, combined with real-time clinical audits, has proven effective in promoting continuous quality improvement. Multidisciplinary collaboration and digital health tools are expected to further enhance QI implementation.

Conclusion: Quality indicators are vital for improving the safety, efficacy, and value of neurosurgical care. Their systematic application enables transparent performance evaluation, fosters clinical excellence, and aligns practice with international standards.

Future efforts should focus on refining neurosurgery-specific QIs, integrating patient perspectives, and advancing data-driven quality initiatives across healthcare systems.

CHANGE-MANAGEMENT IN NEUROTRAUMA CARE. ROADMAP TO INCREASE SUCCESS!

CHRISTIAN MATULA
Neurosurgical Department, Medical University of Vienna, Austria

There is no doubt that Neurotrauma is one of the most leading causes of morbidity and mortality around the world. Assessment of injury prevention, prehospital care, hospital care, as well as post-hospital care for neurotrauma patients are important facts and necessary to improve health care systems and increase efficacy of treatment. The world is changing, so do we and therefore based on the most recent advances in the field it's time for Change-Management in Neurotrauma Care. The following presentation should help to get an idea to prepare a roadmap to increase success.

Change Management in Neurotrauma involves systematically guiding improvements in clinical practice, systems, policies, or technologies related to the diagnosis, treatment, and long-term care of patients with traumatic brain or spinal injuries. Given the complexity of neurotrauma care - which spans emergency medicine, surgery, intensive care, rehabilitation, and psychosocial support, successful change requires a structured, multidisciplinary approach.

Core aspects of change management in Neurotrauma includes identifying the need for change, stakeholder involvement, evidence-based protocol development, education and training, technology and infrastructure integration, monitoring and evaluation as well as sustainability and scaling. The current presentation will also include frameworks often used to get those changes done in a proper way.

One of the key factors seems to establish a kind of "Change Management Initiative" containing opinion leaders and decision makers who can change something in a more modern innovative and future orientated style and way. Some examples of already established and functioning changes will be presented, as well as future projects already in progress, or just in the pipeline.

Finally, the "five P's of Neurotrauma Management" will be presented but also discussed. The "Five P's" of neurotrauma management are not a universally defined concept, but in clinical practice, key principles often revolve around:
Prevention – Implementing safety measures, such as helmet use and fall prevention strategies, to reduce the incidence of neurotrauma.
Prehospital Care – Ensuring rapid assessment, stabilization, and transport of neurotrauma patients to specialized centers.
Primary Assessment – Conducting a thorough neurological evaluation, including

Glasgow Coma Scale (GCS) scoring and imaging studies.
Prompt Intervention – Utilizing surgical and medical treatments like decompressive craniectomy, intracranial pressure monitoring, and neuroprotective strategies.
Post-Acute Rehabilitation – Engaging in multidisciplinary rehabilitation programs to optimize recovery and improve long-term outcomes.

"The Power of one" … but "The Impact of All", or how one small action can cause ripples of positive change as a secret of success in Neurotrauma Care!

ESSENTIAL RATING SCALES IN POST-NEUROTRAUMA COGNITIVE AND PSYCHIATRIC ASSESSMENT INCL PRACTICAL RATING EXERCISES

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Traumatic brain injury (TBI) is a health concern that affects cognitive and psychological functioning with varying levels of severity - mild, moderate, and severe. Accurate assessment of these impairments is critical for diagnosis, treatment planning, and monitoring recovery. Several standardized rating scales are used to evaluate cognitive and psychological outcomes in TBI patients. The Glasgow Coma Scale (GCS) is commonly employed in acute settings to assess consciousness levels. The Rancho Los Amigos Scale (RLAS) evaluates stages of cognitive recovery during rehabilitation. Tools such as the Montreal Cognitive Assessment (MoCA) and the Galveston Orientation and Amnesia Test (GOAT) are useful for identifying memory, attention, and orientation deficits. For psychological assessment, the Beck Depression Inventory (BDI), Geriatric Depression Scale (GDS), and Hospital Anxiety and Depression Scale (HADS) help detect depression and anxiety, which are prevalent after TBI, especially in older adults. These tools play a critical role in guiding clinical decision-making, particularly in populations over 65, where symptoms may be subtle but impactful. A comprehensive approach combining cognitive and psychological assessment enhances the ability to provide individualized and effective rehabilitation strategies for TBI patients.

GUIDELINE RECOMMENDATIONS IN CRITICAL CARE AFTER TBI

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Background: Traumatic brain injury (TBI) remains a leading cause of morbidity and mortality worldwide. Critical care management aims to prevent secondary brain injury and optimize neurological outcomes.

Objective: To summarize current guideline-based recommendations and evolving practices in the critical care management of patients with TBI.

Core Management Principles: Key priorities include the prevention of secondary brain injury by maintaining optimal oxygenation and hemodynamic stability. Management of intracranial pressure (ICP) and cerebral perfusion pressure (CPP) is central, using strategies such as sedation, hyperosmolar therapy, cerebrospinal fluid drainage, and surgical interventions when indicated. CPP is optimized through fluid resuscitation and vasopressor support. Multimodal monitoring, including direct ICP and emerging brain tissue oxygen ($PbtO_2$) monitoring, guides individualized care. Harmful practices such as excessive hyperventilation and unmanaged hypertension should be avoided.

Supportive Measures: Standard care includes seizure prophylaxis, venous thromboembolism (VTE) prevention, early nutritional support, and management of systemic complications. Early palliative care involvement is advised for patients with poor prognosis.

Guidelines and Evidence: Protocols from the Brain Trauma Foundation and other international bodies provide structured, evidence-based recommendations. However, individualized care based on clinical response and monitoring remains essential.

Controversies and Future Directions: Therapeutic hypothermia, while effective in lowering ICP, is no longer routinely recommended due to associations with increased mortality. The role of early, coordinated rehabilitation is increasingly recognized, though consensus on best practices is still evolving.

Conclusion: Evidence-based, protocol-driven, yet individualized critical care is fundamental to optimizing outcomes after TBI. Continued research and refinement of monitoring and rehabilitation strategies are essential to advance care.

PHARMACOLOGICAL AND NON-PHARMACOLOGICAL INTERVENTIONS AFTER NEUROTRAUMA

DAFIN F. MUREȘANU
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Traumatic Brain Injury (TBI) is a global health challenge, with millions of cases reported annually, often leading to long-term disabilities and cognitive impairments. This lecture provides an in-depth analysis of key clinical trials and guidelines shaping TBI rehabilitation and management.

The **global prevalence of TBI** underscores the need for standardized protocols and improved accessibility to rehabilitation services. With millions of new cases annually,

TBI remains a critical burden on healthcare systems worldwide. Variability in treatment approaches across different countries highlights the necessity for harmonized care strategies and increased awareness of rehabilitation advancements.

The **CAPTAIN trials** examine the therapeutic potential of Cerebrolysin as an adjunct treatment for moderate-to-severe TBI. Findings suggest improved cognitive function, enhanced motor recovery, and better overall neurological outcomes, supporting its role in neuroprotection and neurorepair. These results contribute to the development of evolving therapeutic strategies aimed at optimizing patient recovery.

The **Canadian TBI guideline**, developed by INESSS-ONF, offers structured recommendations for the rehabilitation of adults with moderate-to-severe TBI. This guideline emphasizes interdisciplinary approaches, early intervention, and long-term follow-up to ensure sustained improvements in function and quality of life. By integrating evidence-based best practices, the Canadian framework serves as a model for other regions striving to enhance TBI care.

ERABI presents a comprehensive, evidence-based review of rehabilitation interventions for individuals with acquired brain injuries. By systematically evaluating therapies such as cognitive rehabilitation, physiotherapy, and pharmacological approaches, ERABI provides critical recommendations guiding healthcare professionals in delivering effective, individualized treatment plans.

By synthesizing insights from clinical trials and guidelines, this lecture aims to provide a comprehensive understanding of TBI management, encompassing both pharmacological and non-pharmacological approaches, while emphasizing the importance of evidence-based interventions in enhancing patient outcomes and informing global healthcare policies.

THE AMN AND ITS MISSION AND VISION - HOW TO TRANSFORM TRADITIONAL INTO MULTIDISCIPLINARY TRAUMA CARE WITH LONG-TERM FOLLOW-UP

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One of the 2025 objectives of the Academy for Multidisciplinary Neurotraumatology, embodied in its new Vision and Mission, is the focus on bringing to a high-end level its main purpose, namely the advancement of neurotraumatology in research, medical practice and education.

The Academy has a long history and experience in organising international congresses or regional meetings and educational events, be they workshops or teaching courses, as well as emphasising communication between national and international scientific/

academic bodies, and these elements are prerequisites for need to develop new concepts, i.e., multi-purpose benefit tools.

Such new constructs are meant to enhance the entire dynamic of AMN, having at their core the commitment to excellence in education, and to foster academic, scientific and research cooperation through multidisciplinarity.

THE ROLE OF TARGETED TEMPERATURE MANAGEMENT (TTM) IN TRAUMATIC BRAIN INJURY (TBI): PRO POSITION

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Targeted Temperature Management (TTM) should be considered standard practice in selected cases of moderate-to-severe traumatic brain injury (TBI), due to its neuroprotective potential, physiological plausibility, and evidence supporting intracranial pressure (ICP) control and secondary injury mitigation—provided it is implemented with precision, strict protocols, and appropriate patient selection.

1. Pathophysiological Rationale
   TBI induces secondary brain injuries including excitotoxicity, mitochondrial failure, inflammation, and blood–brain barrier disruption. TTM (typically 32–35°C) reduces cerebral metabolic rate by 6–7% per °C, limits free radical generation, and stabilizes neural structures (Badjatia, *Neurocrit Care*, 2009).
2. Intracranial Pressure Control
   TTM effectively reduces elevated ICP, especially in refractory cases. The BHYPO study (Yokobori et al., *J Neurosurg*, 2009) and other clinical trials show significant ICP reduction and neuroprotective effects in this context.
3. Improved Outcomes in Subgroups
   Meta-analyses (Peterson et al., *Neurocrit Care*, 2017) show improved survival and neurological recovery in subgroups - especially post-operative or diffuse injury patients.
4. Feasibility and Modern Safety
   Recent protocols using endovascular cooling or surface systems have reduced complications observed in older trials (Polderman, *Crit Care Med*, 2009). Eurotherm3235 (Andrews et al., *Lancet*, 2015) suffered from protocol inconsistencies and premature rewarming, underscoring the need for precise TTM.
5. Neurological Care Alignment
   TTM is an established standard in post-cardiac arrest care and neonatal encephalopathy (Nielsen et al., *NEJM*, 2013). Pathophysiological overlap with TBI supports TTM application.

Example Protocol: Precision TTM

- Induction: Cool to 33°C within 4 hours
- Maintenance: 33°C for 48–72 hrs (with neuromuscular blockade)
- Rewarming: Gradual at 0.25°C/hr

- Normothermia: Maintain <37.5°C for 72 hrs post-rewarming (e.g., Columbia protocol, St. Michael's Hospital ICU protocol)

Conclusion:
TTM, when applied with precision and appropriate patient selection, is a powerful neuroprotective tool in severe TBI. It reduces ICP, mitigates secondary damage, and improves long-term outcomes. Rather than discarding TTM based on past trial flaws, it should be refined and integrated into modern neurocritical care. TTM should not be dismissed based on heterogeneous study results but rather refined and implemented in specific clinical scenarios. As neurocritical care evolves, **precision temperature management** - not just cooling indiscriminately - should be integrated into multimodal TBI therapy protocols, especially where elevated ICP or diffuse brain injury exists.

TTM is not a panacea, but when used intelligently, it is a powerful tool in the neuroprotective arsenal.

THINKING LIKE A CEO: THE FULL FINANCIAL & MEDICAL PICTURE BEHIND PREMIUM DEVICES & THERAPIES

DOREL SĂNDESC
General Manager, University County Emergency Hospital Timisoara, Romania

This presentation addresses the strategic and financial considerations behind investing in premium medical devices or therapies, emphasizing the need for healthcare leaders to think like CEOs. It explores how high-quality equipment & therapies, although more expensive upfront, yields long-term savings through improved patient outcomes, reduced complications, shorter hospital stays, and enhanced workflow efficiency. Drawing on international data and case studies, it highlights Total Cost of Ownership (TCO) as a crucial metric, integrating acquisition, maintenance, service, and sustainability factors.

Special attention is given to digital transformation and sustainability as drivers of economic and clinical value in modern hospitals. The case of "Victor Babeș" University and County Emergency Hospital Timișoara exemplifies successful funding through public-private partnerships, European grants, and philanthropic efforts. Strategic investments - such as in advanced anesthesia workstations, wireless monitoring, and green infrastructure - are shown to enhance operational performance and clinical excellence.

The presentation concludes by advocating for bold, future-oriented leadership that prioritizes measurable impact over short-term savings. It calls on decision-makers to align medical excellence with economic sustainability through vision, compassion, and strategic foresight.

FUNCTIONAL SURGERY FOR POST-TRAUMATIC NEUROLOGICAL DISORDERS

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After an injury to the nervous system, various neurological disorders or sequelae could be seen, such as spasticity, pain, motor deficit, and organ dysfunction. The author summarizes functional neurosurgical procedures that are helpful for post-traumatic neurological disorders, as follows:

Spasticity is a common neurological sequel to insults of the central nervous system, including traumatic brain injury (TBI) and spinal cord injury (SCI). Intractable spasticity can be treated by an array of functional procedures.

- Selective peripheral neurotomy is suitable for patients with focal spasticity, such as spastic elbow flexion or spastic equinovarus foot.
- Dorsal root entry zone (DREZ) lesion is appropriate for patients with nonfunctional limb spasticity.
- Selective dorsal rhizotomy is commonly used for the treatment of spastic diplegia in patients with cerebral palsy. It may have a role in the reduction of lower limb spasticity in patients with spasticity of cerebral origin (TBI) or spasticity of spinal cord origin (SCI).
- Intrathecal baclofen therapy is popularly utilized in the treatment of widespread or generalized spasticity found in patients with TBI or SCI.

Pain is a complex neurological consequence of injury to the peripheral nerves and spinal cord. A variety of common neurosurgical procedures have been used for the treatment of refractory post-traumatic pain.

- Dorsal root entry zone (DREZ) lesion is appropriate for individuals with segmental pain, such as brachial plexus avulsion pain or neuropathic pain following cauda equina injury.
- Spinal cord stimulation (SCS) is the most common neuromodulation procedure for treating pain syndromes. Painful conditions caused by peripheral nerve injury, SCI, or cauda equina injury can be treated by SCS.

Motor deficit is commonly found in severe peripheral nerve injury and SCI. Peripheral nerve transfer should be considered in patients with peripheral nerve injury. Epidural spinal cord stimulation is increasingly employed for motor restoration in SCI patients.

- Peripheral nerve transfer or neurotization has been used for several decades in the treatment of peripheral nerve injury, particularly in traumatic brachial plexus injury. In recent years, this procedure has been chosen as a restorative procedure to improve motor function in SCI patients.
- Epidural spinal cord stimulation has been found to be an option for restoring voluntary movement in SCI patients. The procedure includes the placement of an

epidural electrode to activate viable motor neurons for practicing voluntary motor control.

Organ dysfunction is encountered in patients with post-traumatic disease. A classic example is diaphragm paralysis after high cervical spinal cord injury (SCI). Respiratory muscles are found to be paralyzed in such cases.

- Phrenic nerve stimulation is the activation of the phrenic nerve that supplies the diaphragm. Activation of the phrenic nerve results in contractions of the hemidiaphragm, which is enough to produce an effective tidal volume and inspiration. This procedure is helpful for the reduction of ventilator use, more natural breathing, and effective airway clearance.

HEAD TRAUMA IN VIETNAM – HOW IMPROVED EMS RESPONSES CORRELATE WITH OUTCOMES

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Head trauma is a leading cause of death both in Vietnam and in the world. The bad outcomes relate to primary injuries and especially to secondary injuries. Many studies have been done in Vietnam and Asia showing that there are almost no appropriate interventions for prehospital head trauma patients. Emergency Medical Services (EMS) are still in their primitive stage in many countries including Vietnam establishing and strengthening the EMS is necessary job. There is also the need for establishing the education and training of prehospital trauma care at medical universities and colleges. Many studies, under the PAROS network in which Vietnam contributes with significant data, have shown the effectiveness of the prehospital intervention in Asian head trauma patients including Vietnamese patients.

CLINICAL OUTCOMES AND SAFETY OF NEUROMODULATION IN THAI PATIENTS WITH MODERATE HEAD INJURY AND NON-OPERATIVE TRAUMATIC INTRACEREBRAL HEMORRHAGE: A FOCUS ON NEUROCOGNITIVE RECOVERY

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Background: Traumatic intracerebral hemorrhage (TICH), even in non-operative cases, often leads to significant brain dysfunction and complex neurological sequelae, despite aggressive neurocritical care aimed at preventing secondary brain injury. Alternative neurotropic therapies, such as Cerebrolysin, derived from pig brain tissue, may offer promising treatment options. Cerebrolysin has shown potential neuroprotective

properties that could aid in the protection and repair of brain cells. This study aims to evaluate the efficacy and safety of Cerebrolysin compared to standard care in patients with moderate head injury and non-operative TICH.

Methods: This randomized, single-blind study assigned participants to two groups: one receiving Cerebrolysin (n = 160) and the other receiving standard care (n = 180). Clinical outcomes were assessed at six months using the Coma Recovery Scale-Revised (CRS-R), the Barthel Index, and the modified Rankin Scale. The study compared both the clinical outcomes and safety between the two groups.

Results: The CRS-R score was significantly higher in the Cerebrolysin group compared to the usual care group ($p = 0.013$) after adjusting for confounders, particularly in the motor ($p = 0.041$), oromotor, and arousal subscales. Additionally, patients receiving Cerebrolysin had significantly lower modified Rankin Scale scores than those receiving usual care. The Barthel Index was also significantly higher in the Cerebrolysin group. Administration of Cerebrolysin was not associated with significant occurrences of seizures or cardiovascular complications.

Conclusion: Cerebrolysin administration is associated with improved functional neurorecovery and a higher likelihood of favorable outcomes in patients with with moderate head injury and non-operative TICH.

AN OUTCOME EXPERT´S PERSPECTIVE ON ESSENTIAL COGNITIVE AND PSYCHOSOCIAL OUTCOME INDICATORS AFTER TBI

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Traumatic brain injury (TBI) can negatively impact patients' lives on many dimensions. Multiple instruments are available for evaluating TBI outcomes, but till our work in the Center-TBI project it was unclear which instruments are the most sensitive for that purpose. Cognitive and psychosocial outcome indicators after TBI focus on measuring the extent of recovery and daily life functioning following a TBI, including functional, cognitive and emotional outcomes, and overall and disease-specific health-related quality of life. These indicators help to assess the effectiveness of treatment and rehabilitation efforts and can provide insights into long-term recovery trajectories.

Instruments were translated and validated in 18 languages and their sensitivity to sociodemographic (sex, age, education), premorbid (psychological health status), and injury-related (clinical care pathways, TBI and extracranial injury severity) factors was assessed by means of cross-sectional multivariate Wei-Lachin analyses. The Glasgow Outcome Scale Extended (GOSE) - the standard in the field of TBI for measuring functional recovery - demonstrated the highest sensitivity in most group comparisons. However, as a single functional scale it is not able to reflect the multidimensional nature

of outcome after TBI. Therefore, the GOSE was used as a reference for further sensitivity analyses on more specific outcome scales, addressing further potential deficits following TBI. The physical component summary score (PCS) of the generic health-related quality of life (HRQOL) instruments (SF-36v2/-12v2) and the TBI-specific HRQOL instruments (QOLIBRI/-OS) were most sensitive in distinguishing recovery after TBI across all time points and patient groups, followed by the RPQ measuring post-concussion symptoms and the PHQ-9 identifying depression. The SF-36v2/-12v2 mental component summary score and the GAD-7 evaluating anxiety were less sensitive in several group comparisons. As cognitive measure the TMT was the most sensitive in the Center-TBI project.

Recommending an extremely lean assessment, the functional recovery status combined with the physical component score (of the SF-12v2), disease-specific HRQOL (QOLIBRI-OS), and post-concussion symptoms (RPQ) can provide a sensitive, time-efficient evaluation of the health status of individuals after TBI in different patient groups. For the PRESENT project (work in progress!) I at the moment recommended a more comprehensive battery: functional recovery/symptoms/ psychosocial and wellbeing aspects): GOSE, RPQ, GADS-7, PHQ-9, QOLIBRI/OS, cognition: BTACT, TMT, RAVLT, Clock Drawing Test. To make all these instruments available f.e. in several Asian languages strict translation and validation guidelines have to be followed (v. Steinbuechel et al, 2023, PLoS One).

ESSENTIAL RATING SCALES IN NEUROTRAUMA PERFORMED BY NURSES

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Neurotrauma, including traumatic brain injury (TBI) and spinal cord injury (SCI), represents a major global health concern with significant impacts on mortality, long-term disability, and quality of life. Accurate assessment of neurological function is essential for guiding clinical decision- making, optimizing nursing care, and improving patient outcomes. Over the years, a variety of standardized rating scales have been developed to evaluate consciousness, motor and sensory functions, cognitive status, and overall neurological deficits.

This lecture highlights the importance of essential rating scales commonly used in the management of neurotrauma, such as the Glasgow Coma Scale (GCS), the Rancho Los Amigos Levels of Cognitive Functioning, the American Spinal Injury Association (ASIA) Impairment Scale, the Disability Rating Scale (DRS) and others. Each tool plays a critical role in initial assessment, ongoing monitoring, and communication among multidisciplinary teams.

The integration of these scales into nursing practice enhances the ability to identify

subtle changes in patient status, facilitates appropriate interventions, and contributes to high-quality, evidence-based care. In nursing education, teaching these tools fosters clinical reasoning and prepares students for real-world complexities in neurotrauma care. Moreover, in research, the use of validated rating scales ensures methodological rigor, comparability across studies, and the generation of robust evidence to inform practice guidelines.

Ultimately, familiarity and competence in using essential neurotrauma rating scales empower nurses to be proactive, informed, and research-minded professionals who can contribute meaningfully to the advancement of neurotrauma care across clinical, academic, and research settings.

Keywords: rating scales, neurotrauma, nurses

CURRENT PRACTICES, EMERGING ROLES, AND FUTURE POTENTIAL OF ADVANCED NEUROMONITORING IN TRAUMATIC BRAIN INJURY IN THAILAND: INTEGRATING PRESSURE REACTIVITY INDEX (PRx), REGIONAL CEREBRAL OXYGEN SATURATION (RSO_2), CEREBRAL AUTOREGULATION (CA), NEAR INFRARED SPECTROSCOPY (NIRS), AND OPTIC NERVE SHEATH DIAMETER (ONSD) FROM CONCEPT TO CLINICAL PRACTICE

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This manuscript aims to assess the incidence and types of traumatic brain injury (TBI) in Thailand and recommend feasible neuromonitoring strategies suitable for resource-limited settings. Focus is placed on personalized and targeted management of severe TBI using tools such as intracranial pressure (ICP), pressure reactivity index (PRx), regional cerebral oxygen saturation (rSO_2), cerebral autoregulation (CA), and non-invasive modalities like near-infrared spectroscopy (NIRS) and optic nerve sheath diameter (ONSD). These monitoring techniques are designed to optimize cerebral oxygen delivery and prevent secondary neurological deterioration by managing elevated ICP and maintaining adequate cerebral perfusion pressure (CPP). While several of these modalities are integrated into clinical guidelines and neuro-monitoring protocols, cost-effectiveness and accessibility remain concerns. Despite increasing use of advanced monitoring tools for continuous assessment of cerebral physiology, bedside interventions targeting dysregulated CA remain limited. Further understanding of the molecular and physiological mechanisms regulating cerebral blood flow, oxygenation, and autoregulation is essential for improving outcomes. In Thailand, particularly in rural areas with limited access to invasive monitoring, non-invasive approaches such as NIRS and ONSD represent practical alternatives. This review emphasizes the need for education, research, and guideline development to enable

broader implementation of neuromonitoring tools across the country.

1. Pressure Reactivity Index (PRx)

Definition:
PRx is a dynamic index that reflects cerebral autoregulation, calculated as the correlation coefficient
between slow waves of ICP and mean arterial pressure (MAP).

Clinical Significance:
- PRx ≤ 0.3: Indicates intact autoregulation.
- PRx > 0.3: Suggests impaired autoregulation and increased risk of secondary brain injury.
- Used to determine individualized CPP targets (CPPopt) and guide hemodynamic management.

Use in Thailand:
- Available in select tertiary hospitals
- Requires invasive ICP monitoring and specialized software (e.g., ICM+), limiting use in rural hospitals.

Future Directions:
- Research collaborations to validate PRx use in the Thai population.
- Development of low cost or open source PRx platforms.

2. Regional Cerebral Oxygen Saturation (rSO_2)

Definition:
rSO_2 reflects localized brain oxygenation, typically measured using NIRS technology.

Clinical Relevance:
- Normal: 55 75%; values <50% or drops > 1 0% from baseline may signal cerebral hypoxia.
- Guides ventilation and oxygenation strategies in patients where invasive monitoring is
- unavailable.

Use in Thailand:
- Applied in academic and private ICUs, mainly in perioperative settings.
- Limited by high equipment costs and lack of reimbursement under the Thai Universal
- Coverage Scheme (UCS).

3. Cerebral Autoregulation (CA)

Definition:
CA is the brain's ability to maintain constant CBF across a range of MAP (typically 50 150 mmHg).

Monitoring Methods:
- Dynamic: PRx, TCD based indices (e.g., Mx), and NIRS derived indices (e.g., COx).
- Static: Measures CBF response to stepwise MAP changes.

Thai Context:
- Monitoring of CA is not widely practiced outside academic hospitals.
- TCD is occasionally used but is operator dependent.

Recommendation:
- Incorporate simplified CA monitoring into provincial ICU protocols.

4. Near-Infrared Spectroscopy (NIRS)

Definition:
A non invasive optical technique using near infrared light to estimate cerebral tissue oxygenation.

Applications in TBI:
- Real time bedside monitoring of rSO_2.
- Assessment of autoregulatory status using NIRS derived indices.

Use in Thailand:
- Growing use in pediatric and perioperative care.
- Ideal for resource limited, rural, or pre hospital environments.

Barriers:
- Equipment cost, training gaps, and lack of clinical protocol integration.Equipment cost, training gaps, and lack of clinical protocol integration.

5. Optic Nerve Sheath Diameter (ONSD)

Definition:
ONSD ultrasound measures optic nerve sheath expansion, serving as a surrogate for

raised ICP.

Clinical Application:
- ONSD >5.0 5.7 mm may indicate ICP >20 mmHg.
- Useful for rapid ICP assessment in settings lacking CT or invasive monitoring.

Use in Thailand:
- Widely practiced in emergency and rural hospitals.
- Incorporated into emergency medicine training and eFAST protocols.

Advantages:
- Non invasive, inexpensive, easy to learn.
- Valuable in pre hospital triage, mobile clinics, and disaster scenarios.

Recommendations for Thailand

1. Guideline Development:
- Create national protocols incorporating ONSD and NIRS in emergency and early TBI
- management.

2. Training and Education:
- Train emergency and ICU staff in bedside ultrasonography and non invasive neuromonitor interpretation.

3. Pilot Programs:
- Introduce CA and rSO_2 monitoring in selected provincial and regional ICUs.

4. Research and Validation:
- Support multicenter research to validate PRx, CA indices, and ONSD thresholds in the Thai population.

5. Integration in Education:
- Embed neuromonitoring principles in postgraduate training programs for emergency, neurology, and critical care medicine.

Conclusion

Advanced neuromonitoring holds promise for improving TBI outcomes in Thailand. Although PRx and rSO_2 are currently limited to high resource settings, scalable and cost effective tools like NIRS and ONSD can be rapidly deployed in rural and under resourced hospitals. With appropriate investment in training, research, and guideline development, Thailand can bridge the gap between urban and rural neurocritical care, reduce delays in

TBI diagnosis and management, and improve long term neurological outcomes. Further studies are needed to identify optimal physiologic thresholds and personalized strategies suitable for the Thai healthcare system, particularly in resource constrained environments. Further study in Thailand is required to determine optimal cerebral physiologic based technology, monitoring parameters, and individu alized thresholds to optimize CA and potentially improve neurologic outcomes across a spectrum of TBI patients, which focus in Thai rural areas where invasive monitoring is not routinely performed due to resources limitation. Encourage and training of non invasive methods might solve these issues.

Keywords: Traumatic brain injury; Neuro monitoring; Cerebral autoregulation; Cerebral homeostasis; Secondary brain injury

FACTOR TO PREDICT EXTERNAL VENTRICULAR DRAINAGE INFECTION IN PATIENTS WHO HAVE UNDERGONE EXTERNAL VENTRICULAR DRAINAGE IN SEVERE TRAUMATIC BRAIN INJURY

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External Ventricular Drainage (EVD) is a common procedure used to relieve intracranial pressure by draining cerebrospinal fluid (CSF) from the ventricles in patients with conditions such as traumatic brain injury, hydrocephalus, or subarachnoid hemorrhage. However, one of the significant risks associated with EVD is infection, which can lead to complications such as ventriculitis, meningitis, and, in severe cases, sepsis.

Several factors can predict or increase the risk of infection in patients who undergo external ventricular drainage. These factors can be categorized into patient-related, procedural-related, and device-related factors.

1. Patient-Related Factors

- Immunocompromised State: Patients with weakened immune systems, such as those on immunosuppressive therapy (e.g., after organ transplants or chemotherapy), or those with underlying conditions like diabetes or cancer, are at higher risk for infections.
- Age: Both very young and elderly patients may be more vulnerable to infections due to weaker immune systems or other age-related factors, such as comorbidities or poor tissue healing.
- Comorbidities: The presence of other medical conditions, such as diabetes, chronic kidney disease, or malnutrition, can affect the body's ability to fight infection, thereby increasing the risk of EVD-related infections.
- Prolonged Hospital Stay: Longer hospitalization, especially in intensive care

units (ICUs), increases exposure to hospital-acquired infections, including those associated with invasive devices like EVDs.
- Skin Integrity and Hygiene: Poor hygiene and compromised skin integrity around the insertion site (e.g., from trauma or pre-existing infections) can contribute to the risk of bacterial entry and infection.

2. Procedural-Related Factors

- Duration of EVD Use: Prolonged use of an external ventricular drain is a well-established risk factor for infection. The longer the EVD remains in place, the higher the likelihood of bacteria colonizing the catheter or the insertion site.
- Technique of Insertion: Proper sterile technique during insertion is essential in preventing contamination. Any breach in sterile protocols increases the risk of introducing microorganisms into the patient's system.
- Reinsertion of EVD: If the catheter is removed and reinsertion is necessary, the chances of infection can increase due to repeated exposure of the ventricles to external contaminants.
- Drain Maintenance: Inadequate monitoring and maintenance of the EVD, including improper handling of the drainage system or failure to sterilize equipment, can introduce bacteria into the system. Regular flushing of the catheter and ensuring the system remains closed and sterile are crucial.

3. Device-Related Factors

- Catheter Material and Design: The type of catheter used may influence the risk of infection. Catheters that are not specifically designed for prolonged use or those with rough surfaces may increase the likelihood of bacterial colonization.
- Microbial Colonization of the Catheter: Studies have shown that biofilm formation on the catheter surface is a significant cause of infection. Bacteria that form biofilms are more resistant to antibiotics, making the infection harder to treat.

4. Microbial Factors

- Type of Microorganisms: The most common pathogens involved in EVD infections are Staphylococcus aureus, coagulase-negative staphylococci, and Gram-negative bacteria. In particular, multi-drug-resistant organisms (e.g., MRSA, VRE, and Pseudomonas aeruginosa) are a growing concern.
- Sources of Infection: Infections may be exogenous, from hospital staff or the environment, or endogenous, where bacteria from the patient's own skin or other body sites (e.g., sinuses, urinary tract) cause the infection.

5. Clinical Indicators

- Fever: A common early sign of infection in patients with EVD. Monitoring body temperature regularly can help identify infections early.
- Changes in CSF Characteristics: Cloudy or purulent CSF, as well as an increase in

white blood cells, are suggestive of infection. Regular CSF analysis can be helpful in diagnosing ventriculitis or meningitis early.

- Elevated Inflammatory Markers: Elevated C-reactive protein (CRP) or procalcitonin levels can signal an infection, although these markers are not specific to EVD infections.

6. Preventive Strategies

Conclusion

In summary, the factors that predict EVD-related infections are multifactorial and include patient-specific factors (like immune status and comorbidities), procedural factors (such as the duration of the drain and technique of insertion), device-related considerations (like the catheter material), and microbial factors (including the type of bacteria involved). Addressing these risk factors through careful monitoring, adherence to sterile protocols, and timely intervention can significantly reduce the incidence of infections in patients undergoing EVD.

THE GLOBAL BURDEN OF TBI WITH SPECIAL EMPHASIS ON THE APC REGION

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Road traffic injury (RTI) is a major cause of TBI mortality in Thailand, followed by fall in the elderly. The mortality from RTI is around 18,000 annually, with up to 800,000 admissions per year.

We know that there are a lot of long-term consequences for the victims of TBI which makes it hard to estimate the economic burden. Now the incidence has declined (since COVID) and the economy slows down without major law enforcement.

Neurosurgical services are now covering 70/78 provinces in Thailand. However, it was hard to maintain neurosurgeons in the service of the ministry of public health due to the demanding nature of the work and relatively modest compensation, with a high annual turnover rate.

The Royal College of Neurosurgeons of Thailand tries to push the distribution of neurosurgeons, get them an adequate equipment list and ask for more income for overtime work.

ESSENTIAL BIOMETRIC PRINCIPLES IN NEUROTRAUMA RESEARCH

JOHANNES VESTER
AMN President

Evidence-based practice strongly knocks on the door of clinical research in neurology and neurorehabilitation. The randomized controlled (or clinical) trial is considered to provide the most reliable evidence and is held as the gold standard in scientific inquiry (Handbook of Clinical Neurology 2013). But how are the chances to improve therapeutic concepts within the demanding framework of evidence-based medicine and guideline development systems such as GRADE?

Recent reports from interdisciplinary working groups consisting mostly of neurologists, neuropsychologists, and biostatisticians, state that to create improvements in neuroscience research, important methodological lessons from the past must be considered in future clinical research. Methodological flaws in both randomized clinical trials (RCTs) and non-interventional observational studies are identified as the major reasons why pharmacological support fails to demonstrate efficacy, thus hindering the development and adoption of beneficial therapies.

Is neurotrauma clinical research stifled by backward oriented designs?

One of the most important steps for future research in complex fields such as neurotrauma is the shift away from the long-standing "one-criterion paradigm" and binary "success-failure" thinking that has dominated clinical research on neuroprotective treatments for decades. Outcome after neurotrauma is inherently multidimensional. As emphasized by the US Traumatic Brain Injury Clinical Trials Network, multiple measures are necessary "to address the breadth of potential deficits and recovery following TBI," including neurophysical impairments, cognitive dysfunction, and challenges in social reintegration. Encouragingly, cutting-edge data analysis procedures are now available that fully align with this multidimensional outcome approach. This new pathway is considered to more accurately reflect the complex reality of recovery after neurotrauma, while also enhancing assay sensitivity within the framework of evidence-based medicine.

Another challenge in neurotrauma research is the increasing demand for prospective observational studies to complement findings from randomized controlled trials (RCTs) by providing data on the real-world effectiveness and safety of treatments. However, methodological flaws in study design, analysis, and interpretation, as well as the absence of widely accepted standards for quality assessment, have limited the practical value of observational research. A significant milestone has been the recent implementation of the GRACE Principles for High-Quality Observational Studies of Comparative Effectiveness, opening a promising pathway towards improved validity, assay sensitivity, and evidence-based grading. To ensure meaningful and reliable conclusions, such studies must apply rigorous data methodologies and be conducted in full accordance with good clinical practice.

In addition to outlining key statistical principles and methodological challenges, the presentation highlights emerging successful approaches and their relevance for future developments in neurotrauma research.

GUIDELINE RECOMMENDATIONS IN POST-TBI REHABILITATION: BRIDGING EVIDENCE TO REAL-WORLD PRACTICE

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Traumatic Brain Injury (TBI) is a leading cause of long-term disability globally, imposing significant physical, cognitive, and psychosocial burdens on patients and caregivers. Unlike focal injuries, TBI often causes diffuse brain damage, necessitating early, prolonged, and multidisciplinary rehabilitation for optimal recovery. While clinical guidelines emphasize this approach, real-world implementation faces barriers - particularly in resource-limited setting - due to financial constraints, workforce shortages, and fragmented health systems.

Drawing from his experience pioneering a highly effective community-based gait and balance rehabilitation program for older adults in Thailand, Dr. Parit Wongphaet proposes an innovative model to improve TBI rehabilitation accessibility. This solution leverages:

- Social enterprise frameworks for sustainable, decentralized service delivery,
- Online caregiver education and tele-rehabilitation to bridge expertise gaps,
- Open-access tools (e.g., printable cognitive tests, exercise guides), and
- Cross-disciplinary collaboration among nurses, therapists, and community health workers.

Originally scaled for fall prevention - now a nationally recognized program under policy review - this model demonstrates how guideline recommendations can be adapted to low-resource settings. The talk will outline actionable strategies to align such innovations with health financing systems, ensuring equitable access to holistic, long-term TBI rehabilitation where traditional hospital-based care remains out of reach.

SEVERE TBI WITH ASDH AND UNEXPECTED SEQUELAE / MILD TBI WITH BRAIN CONTUSION AND LATER ALTERATION OF CONSCIOUSNESS

VICH YINDEEDEJ
Neurosurgeon and Instructor at Thammasat University Hospital, Thailand

We will present demonstrative cases of acute neurosurgical care in trauma, encouraging the audience to actively participate in discussing management strategies.

Case 1 involves a patient with severe traumatic brain injury and acute subdural hematoma. An unexpected complication later necessitated further urgent intervention. The key discussion point will focus on how to recognize early warning signs of this complication to guide timely management.

Case 2 features a patient with mild traumatic brain injury accompanied by traumatic subarachnoid hemorrhage and brain contusion. While under observation, the patient showed a decline in consciousness, prompting repeat CT imaging. The main discussion will center on identifying the underlying cause of this deterioration and determining the appropriate management approach.

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2008-2021	Head of Department at Tusi Memorial Clinic
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M.D. PhD. Agata Andrzejewska finished her residency in University Hospital No 1 in Szczecin, that oversees a wide range of different patients and cases including big trauma center, neurosurgery and neurointensive care. She is a specialist in neuroanesthesiology, author of numerous scientific publications and lecturer on acute brain injury, subarachnoid hemorrhage and traumatic brain injury. She is the creator of the national, original "Brain is Team" course on multidisciplinary care of patients with central nervous system trauma. She has also gained clinical and research experience through internships at leading foreign centers, including The Johns Hopkins Hospital in Baltimore, a renowned trauma center.

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2017 Fellowship award, the 113th Annual Meeting of the Japanese Society of Psychiatry and Neurology (JSPN), Japan
2015 Research presentation award, Thai Society for Geriatric Psychiatry and Neuropsychiatry 2014 Postgraduate academic award, Department of Psychiatry, Faculty of Medicine, Chulalongkorn University

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I am a German neurologist with over 30 years of expertise in the field of neurorehabilitation, with early rehabilitation of disorders of consciousness after severe TBI and spasticity management as my main field. Scientifically, my focus lays on recovery after stroke, especially on the assessment and management of motivational disorders after acquired brain injury. I am currently working as Secretary General of the European Federation for Neurorehabilitation and Chair of the Special Interest Group on Motivation in Neurorehabilitation of the WFNR.

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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.jseamed.org/index.php/jseamed/article/view/100 DOI: https://doi.org/10.55374/jseamed.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.jseamed.org/index.php/jseamed/article/view/102 DOI: https://doi.org/10.55374/jseamed.v6i0.102
3. Fuengfoo P, Jongstapongpan A, Hansiriphan P, Srisawat N, Detporntewan P, Pinyotepprataarn R, Boontoterm P, Palwatwichai A, Phancharoenkit N. Spontaneous intestinal perforation in critical COVID: A case report . Clin Crit Care [Internet]. 2022 Jul. 17;30:2022:e0012. https://he02.tci-thaijo.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

- 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 anesthestised 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, EI Salam Hospital, Mohandisseen.
Director of ICU, Italian Hospital in Cairo "Umberto I".
Member of the National Society of Critical Care in Egypt

MEDICAL 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 & PROFFESIONAL ORGNIZATIONS

- 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 - (PAICCCEM)
Actively participating as a speaker 2010 in Sharm Elsheikh, Egypt:

- Nutritional Aspects in Critically III 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. Trancetympanic 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 Anaethesia 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 Anaethesia 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 Anaethesia 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 isoflorane 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 (heamodynamic 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).

KRISHNAPUNDHA BUNYARATAVEJ
THAILAND

- Office Address: Division of Neurosurgery, Department of Surgery, Faculty of Medicine, Chulalongkorn University, Bangkok 10330, Thailand
- Contact e-mail: krishnapundha.b@chulahospital.org

EDUCATION
- 1987-1993 Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand
- 1994-1995 Transitional Year Providence Hospital & Medical Centers Southfield, MI, USA
- 1995-1996 General Surgery: Providence Hospital & Medical Centers, Southfield, MI, USA
- 1996-1999 Neurosurgery fellow: Wayne State University, Detroit, USA
- 1999-2000 Neurosurgery resident: Chulalongkorn University, Bangkok, Thailand

PREVIOUS PROFESSIONAL EXPERIENCE

Academic Achievement:
- MD (2nd class Hon) Chulalongkorn University, Bangkok, Thailand, 1993
- Certified Board in Neurological Surgery, 2000
- Associate Professor in Neurosurgery, 2013

Administrative Experience
1. Subcommittee of Neurosurgical Residency Training of The College of Neurological Surgeons of Thailand 2010-2012
2. Subcommittee of Neurosurgical Residency Training of The Royal College of Neurological Surgeons of Thailand 2013-2014
3. Committee of The Royal College of Neurological Surgeons of Thailand 2015-present
4. Editor-in-Chief of Neurological Surgery 2017-2021
5. Treasurer, The Royal College of Neurological Surgeons of Thailand 2021-2023
6. Scientific chairman, The Royal College of Neurological Surgeons of Thailand 2023-2025
7. Secretary General, The Royal College of Neurological Surgeons of Thailand 2025-present

Professional Membership
1. The Royal College of Neurological Surgeons of Thailand
2. The Royal College of Surgeons of Thailand
3. Medical Council of Thailand

Krishnapundha Bunyaratavej, MD graduated from the Chulalongkorn University and completed training in neurosurgery at the Chulalongkorn University and Neurosurgery Fellowship at Wayne State University, Michigan, USA. He has authored several papers in the peer-reviewed medical literature. Dr. Bunyaratavej is recognized for his surgical treatment of brain tumor, epileptic disorder, Parkinson's disease, movement disorders, pain conditions and spinal diseases. Dr. Bunyaratavej currently holds associate professor position in neurosurgery at Division of Neurosurgery, Department of Neurosurgery, King Chulalongkorn Memorial Hospital. He is a frequent speaker to audiences at national and international neurosurgical meetings on advanced neurosurgical procedures and treatments.

KOLLATEE BURANARACH

THAILAND

Contact e-mail: kollateefa@gmail.com

EDUCATION

- Doctor of Medicine
  Phramongkutklao College of Medicine, Mahidol University, Thailand - 2013

- Diploma of Rehabilitation medicine
  Phramongkutklao hospital, Thailand - 2019

- Certification of Acupuncture and Moxibustion
  The Royal Thai Army Medical Department and Tianjin University of traditional Chinese Medicine, Thailand - 2020

Work Experience

- 2013-2014 General Internist at Fort Jiraprawat Hospital, Nakhon Sawan, Thailand
- 2014 General Internist at Military doctor of Yala 16 task force, Yala, Thailand
- 2014-2015 General Internist at Fort Pichai Dap Hak Hospital, Uttaradit, Thailand
- 2019-2020 Physical medicine and rehabilitation doctor at Ananda mahidol Hospital, Lopburi, Thailand
- 2020-Present Physical medicine and rehabilitation doctor at Phramongkutklao hospital, Bangkok, Thailand

PRADIT CHAIYABUD
THAILAND

Education

1988-1991	The Medical Council of Thailand- Phramongkutklao Hospital- Diploma of the Thai Board of Neurological Surgery
1979-1985	Chulalongkorn University Doctor of Medicine (M.D.)

Work Experience

1991-2023	Neurosurgeon,Ratchaburi Hospital
1985-1988	General Physician, Wang Nam Yen Hospital

Extra-Curricular Activities

2012-present	The Royal College of Neurological Surgeons of Thailand Committee
2014-present	Chairman of The Neurosurgeon of the Central and the East of Thailand

ALEXANDRU V. CIUREA
ROMANIA

Professor Alexandru Vlad Ciurea is one of Romania's most distinguished medical scientists, with an uninterrupted career in neurosurgery spanning more than 58 years. A graduate of the Carol Davila University of Medicine and Pharmacy in 1964, Professor Alexandru Vlad Ciurea earned a national appointment as a resident neurosurgeon in 1967 at the Gheorghe Marinescu Hospital in Bucharest. Since then, he has devoted his entire professional life to the field of neurosurgery - clinically, surgically, academically, and administratively - performing over 24,000 procedures, more than half of which were in pediatric neurosurgery.

Currently, Professor Alexandru Vlad Ciurea serves as Scientific Director at Sanador Clinical Hospital in Bucharest, a role he has held since 2012. Under his leadership, the hospital's

neurosurgical facilities have been outfitted to world-class standards, including advanced neuronavigation systems, Kinevo 900 operating microscope, craniotomy equipment, Maquet operating tables, and specialized spinal instrumentation. His vision and dedication have elevated Sanador into a leading institution for cutting-edge neurosurgical care in Eastern Europe.

Academically, Professor Alexandru Vlad Ciurea rose through all university ranks by competition: Lecturer (1991), Associate Professor (1993), and Full Professor of Neurosurgery (1997), all at his alma mater, the Carol Davila University. Between 1999 and 2010, he was Head of the Neurosurgery Department at Bagdasar-Arseni Emergency Clinical Hospital and served as its General Director from 1999 to 2005. During this time, he spearheaded the creation of Romania's first "Center of Excellence in Neurology and Neurosurgery", officially inaugurated in 2005. Developed in collaboration with the Ministry of Health, the center offered comprehensive European-standard infrastructure in clinical neurosurgery and neuroimaging, and was among the few institutions in Europe to implement a fully operational Gamma Knife Surgery platform.

In parallel with his institutional leadership, Professor Alexandru Vlad Ciurea has made significant contributions to national medical infrastructure by establishing and consolidating neurosurgery departments at regional hospitals in Brașov, Oradea, Ploiești, Pitești, Râmnicu Vâlcea, and Piatra Neamț. He also played a key role in developing neurosurgical units within Bucharest's Elias University Emergency Hospital and the Grigore Alexandrescu Children's Emergency Hospital. In 2009, he earned the title of Senior Scientific Researcher (Level I) and has since coordinated 18 national research projects.

From 1996 to 2006, Professor Alexandru Vlad Ciurea served as President of the Romanian Society of Neurosurgery and continues to be its Honorary President. Through this role, he has championed the growth of Romanian neurosurgery, organizing numerous national and international congresses, symposia, and high-caliber Continuing Medical Education (CME) courses. Since 1999, he has also served as a Ph.D. supervisor, mentoring a generation of future neurosurgeons.

Internationally, Professor Alexandru Vlad Ciurea has been an active member of the European Association of Neurosurgical Societies (EANS), and from 2005 to 2009, he held the position of Vice President of the World Federation of Neurosurgical Societies (WFNS). He subsequently served as Member (2009–2013) and then Chair (2013–2017) of the WFNS Nominating Committee, contributing significantly to the global visibility of Romanian neurosurgery.

Professor Alexandru Vlad Ciurea is a member of the editorial boards of prestigious journals such as Neurosurgery (USA), World Neurosurgery (USA), Romanian Neurosurgery, Journal of Medicine and Life, and Revista Medico-Chirurgicală Iași. His broader role as a public intellectual is evidenced by active contributions to Viața Medicală, Politici de Sănătate, România Liberă, and Contemporanul, where he fosters public understanding of neuroscience.

In recognition of his exceptional achievements, Professor Alexandru Vlad Ciurea has been elected to several academic bodies, including:

- New York Academy of Sciences (1995)
- Romanian Academy of Scientists (2007)

- Academy of Medical Sciences (2009)
- Multidisciplinary Academy of Neurotraumatology (Phoenix, Arizona, 2004)
- Brazilian Academy of Neurosurgery (2007)

In February 2022, he was elected Honorary Member of the Romanian Academy.
Professor Alexandru Vlad Ciurea holds 10 honorary doctorates awarded by universities in Romania and the Republic of Moldova, including the Nicolae Testemițanu University of Medicine and Pharmacy in Chișinău.

He has been decorated by the President of Romania with:
- the National Order of "Faithful Service" – Commander rank (2000)
- the National Order "Star of Romania" – Knight rank (2019)

These honors affirm his dual legacy as a world-class neurosurgeon and academic luminary.

Scientific Output and Innovation
Professor Alexandru Vlad Ciurea is the author of 44 monographs, including:
- 36 in neurosurgery and neuroscience
- 5 in healthcare management
- 3 on food additive toxicity and related scientific topics

He was chief editor of the Treatise of Neurosurgery (2 volumes, 2010 and 2011, Medical Publishing House) and co-author of the landmark Pediatric Neurosurgical Pathology (1980) with C. Arseni and L. Horvath, which received the Gheorghe Marinescu Prize from the Romanian Academy. Other notable titles include:
- Cranio-Cerebral Trauma (2006)
- Advances in Intracranial Tumors (2011)
- Neurodegenerative Diseases (Romanian Academy Publishing House, 2024)

Professor Alexandru Vlad Ciurea also coordinated the 2024–2025 edition of the Treatise of Neurosurgery (2 volumes, with 72 national contributors) and co-led the surgical volumes on general surgery, ophthalmology, ENT, and cervicofacial surgery in the Surgical Treatise published by the Romanian Academy, in collaboration with Academician Irinel Popescu.
His publication record includes:
- 226 ISI-indexed articles
- 137 PubMed-indexed articles
- 96 BDI-indexed articles
- H-index: 28 (Google Scholar), 18 (Scopus)
-

International contributions by Professor Alexandru Vlad Ciurea include:
- "Intracranial Hypertension" (NOVA Publishing, New York, 2009, with Dr. Ștefan Iencean)
- "Neural Frontiers" (Editor: Professor Alexandru Vlad Ciurea, MDPI, Basel–Barcelona–Wuhan, 2023)
- Chapters in eight internationally published neurosurgical monographs

He holds two OSIM patents:

1. “Unishunt Drainage System”, in current neurosurgical use
2. “The Hidden Anatomy in the Work of Michelangelo”, an interdisciplinary exploration of art and neuroanatomy

Science Communication and Public Engagement
In addition to his academic work, Professor Alexandru Vlad Ciurea promotes neuroscience education to the general public through best-selling books, including:

- “Journeys to the Center of Thought” (2019, Minerva Publishing)
- “Brain Health Made Simple” (2022, Bookzone)
- “Rediscovering the Self through Science and Faith” (2023, Bookzone), co-authored with Father Constantin Necula

Through these publications and public lectures, Professor Alexandru Vlad Ciurea has become a nationally recognized thought leader and respected voice in neuroscience.

Prof. Alexandru Vlad Ciurea MD., PhD., MSc., Dr. h.c. Mult.
Honorary Member of Romanian Academy - Medical Science Section
Emeritus Professor of “Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania
Professor of neurosurgery, “Carol Davila” University of Medicine and Pharmacy, Bucharest, Romania.

DONG YOUNG CHO
SOUTH KOREA

I. Professional details:

• Office Address	Department of Neurosurgery Ewha Womans University Seoul Hospital, Ewha Womans University, College of Medicine, Seoul, Korea
• E-mail	nsdyc0501@gmail.com
• Subspecialty in Neurosurgery	Vascular/Endovascular
• Position (current)	Assistant Professor (Ewha Womans University Seoul Hospital)

II. Education

2009	M.D	Inha University, College of Medicine
2018	Master degree	The Catholic University of Korea, Postgraduate School

2018 Doctoral degree The Catholic University of Korea, Postgraduate School

III. Post-Graduate Training

2009.3-2010.2 Internship, Catholic medical center,
The Catholic University of Korea,
College of Medicine

2010.3-2014.2 Residency of Neurosurgery,
Catholic medical center
The Catholic University of Korea
College of Medicine

IV. Academic and Hospital Appointments

2014.3-2015.4 Served in Korean Army Surgeon as Captain

2015.5-2017.4 Served in Korean Army Neurosurgeon as Captain
Armed forces Hampyeng hospital, Chief.

2017.5-2018.2 Clinical instructor in Cerebrovascular surgery
Department of Neurosurgery
Seoul St. Mary's hospital

2018.3-2019.1 Clinical instructor in Interventional neuroradiology
Department of Radiology
Seoul St. Mary's hospital

2019.2- Assistant Professor in Cerebrovascular surgery
Department of Neurosurgery
Ewha Womans University Seoul Hospital

2023.6- Director
Hemorrhagic stroke center
Ewha Womans University Cerebrovascular Hospital

V. Certification and Licensure (State and Number)

A. Certification
Korean Board of Neurosurgery (2750) Feb. 2014

B. Licensure
Medical Doctor (100437) Feb. 2009

CĂTĂLINA CRIȘAN
ROMANIA

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 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 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 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 Comission of psychiatric forensic expertise. Currently she is a member of the Huntington's disease service in Romania and she is actively involved in the evaluation of the patients and families with HD. She published 6 books for psychiatric trainees and specialists in psychiatry and over 55 ISI and BDI articles.

STEFANIE DUCHAC
GERMANY

Stefanie Duchac is professor of speech and language therapy at the SRH University in Germany. She has many years of clinical experience in diagnosis and treatment of patients with dysphagia following stroke and traumatic brain injury. In addition to her clinical work, she was regularly involved in various clinical research projects. Since October 2019 she has been an active board member of the European Society of Swallowing Disorders (ESSD), where she now is the head of the ESSD Academy. In addition to her passion about lecturing, as certified business-coach she supports (interprofessional) dysphagia teams. She frequently conducts seminars and workshops, primarily in the field of evidence-based dysphagia management and videofluoroscopy of

swallowing. Stefanie is co-founder of the first German-language dysphagia podcast "IssNix!", initiator of a national VFSS-register as well as the dysphagia mentorship program. As keynote speaker (e.g. TEDx) she engages herself to raise awareness for dysphagia.

DAI HA DUONG
VIETNAM

Profession and Affiliation: Neurosurgeon at Viet Duc University Hospital and lecturer at Hanoi Medical University
E-mail: duongdaiha@hmu.edu.vn

Job titles

- Dai Ha Duong, M.D, Ph.D., Faculty, Department of Surgery, Hanoi Medical University
- Vice-chief, Neurosurgical Center, Viet Duc University Hospital
- Chief, Scientific research Department, Viet Duc University Hospital
- Associate. Professor, Hanoi Medical University
- General Secretory of Vietnamese Neurosurgical Society (from 2022 – now)
- Chief, Department of Neurosurgery and Spine Surgery, Hanoi Medical University Hospital, Hanoi, Vietnam.

Practice experience:

Years	Hospitals	Title
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 (3m)	Toranomon Hospital - Tokyo, Japan	Fellowship training in neurosurgery
2011(6m)	University of Colorado- Denver- USA	Visiting doctor

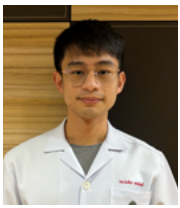
2015-now	Hanoi medical University Viet Duc University Hospital	Faculty, Department of Surgery Deputy Chief of Neurosurgery Department

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, assistance 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:

General Secretary of Vietnamese Neurosurgical Society
Member of Asian Neurosurgery Society (ACNS)
Member of CNS (Congress of Neurosurgery Society, USA)
Member of NASS (North American Spine Society)



NAPAT EKKANAN
THAILAND

Hospital appointment

2018-2019	Internist, Nan hospital, Nan
2019-2021	Internist, Thawangpha hospital, Nan
2021-2025	Resident at Department of Surgery, Phramongkutklao hospital, Bangkok
2025-present	General surgeon, Pua Crowd Prince hospital, Nan

Medical Certification

2018	Doctor of Medicine (M.D.), Phramongkutklao College of Medicine, Bangkok
2025	Diplomat Thai Board of Surgery

Medical activities

2021	Certified Advanced Trauma Life Support™
2024	Representative of PMK's resident academic week presentation

MOHAMMED ELTANTAWY

EGYPT

Prof. of Neurosurgery, Department of Neurosurgery, Faculty of Medicine, Benha University
Office: Farid Nada St., El Atebaaa tower El Eshara Sq., Benha, Egypt.
Phone no.: +20133230022 (Office)
E-mail: Hammad_Neurosurg@yahoo.com

Education and Training

Doctorate Degree of Neurosurgery, Ain Shams University, Faculty of Medicine, Department of Neurosurgery, Cairo, Egypt – November 2011.

Training in Skull Base, Cerebrovascular Surgery and spine surgery with Prof. Hae Dong Jho in Allegheny General Hospital, Drexel University, Pittsburgh PA United States of America. From May, 2008 to August, 2010.

Skull Base Surgery and microsurgical anatomy Lab, Prof Khaled Aziz, Drexel University, from May 2008 to August 2010

Skull Base Surgery and microsurgical anatomy, Prof Albert Rhoton, University of Florida, February, 2009.

Master Degree of General Surgery, Department of General Surgery, Faculty of Medicine, Benha University, Benha, Egypt – May 2004.
Resident of neurosurgery, Department of Neurosurgery, Benha University Hospitals, Benha, Egypt, Feb 2002 - July 2004

Senior registrar of neurosurgery Naser Institute neurosurgery department Dec. 2004 up till may 2008.

Senior registrar of neurosurgery in Heliopolis hospital neurosurgery department, Dec.2004 up till May 2008.

Intern in the Benha University Hospitals, Benha, Egypt, Sept. 99 - Sept. 2000.

Research fellow in Allegheny General Hospital, Pittsburgh PA from may 2008 until August 2010 under supervision of Prof. Dr. Khaled Aziz Director of complex intracranial skullbase department.

Clinical fellow in the Department of Minimally Invasive Neurosurgery Allegheny General Hospital, Pittsburgh PA, from July 2009 till august 2010 under supervision of Prof. Dr. Hae Dong Jho, the director of endoscopic minimally invasive neurosurgery unit.

Certification and Licensure

1999	M.B.B.Ch. Benha University, Faculty of Medicine, Benha Egypt May, 1999
1999-2000	Intern in Benha University Hospitals, Benha, Egypt
2004	Master Dgree in General Surgery Benha University, Faculty of Medicine, Cairo Egypt, November, 2004
2011	MD degree in Neurosurgery Ain Shams University, Faculty of Medicine, Cairo, Egypt, November 2011

Appointments and Positions

2023-Now	Professor of Neurosurgery, Department of Neurosurgery, Faculty of Medicine, Benha University, Benha, Egypt.
2018-2023	Associate Professor of Neurosurgery, Department of Neurosurgery, Faculty of Medicine, Benha University, Benha, Egypt
2012-2018	Lecturer in Neurosurgery, Department of Neurosurgery, Faculty of Medicine, Benha University, Benha, Egypt.
2004-2012	Assistant lecturer in Neurosurgery, Department of Neurosurgery, Faculty of Medicine, Benha University, Benha, Egypt.
2009-2010	Clinical fellow in the department of minimally invasive neurosurgery Allegheny General Hospital, Pittsburgh PA
2008-2010	Research fellow in Allegheny General Hospital, Pittsburgh PA

Honors

2004	Awarded (Excellent Degree) for my Master thesis “Thoracolumber fracture spine”. Faculty of Medicine, Benha University.
2004	Awarded (Very Good Degree) in the General Surgery Master Degree Examination. Department of General Surgery, Faculty of Medicine, Benha University
2008	Awarded 2 years funding for abroad pre-Doctorate neurosurgery research and training, Allegheny General Hospital Drexel University Pittsburgh PA, USA.
2011	Awarded (Excellent Degree) for my Ph.D. thesis “Transsphenoidal Pituitary Surgery for Sellar and Suprasellar Pituitary Adenomas”. Ain Shams University, Faculty of Medicine

2011 The Board recorded for the Doctorate of Neurosurgery examination. Faculty of Medicine Ain Shams University.

Conferences and Meetings

1. Dr Albert L. Rhoton, Jr. Microneurosurgical course 16 Feb - 18 Feb 2005
2. annual conference of the Egyptian society of the neurological surgery. march 2006, march 2007, march 2008
3. annual meeting of congress of neurological surgery 2008
4. temporal bone microanatomy and hands on dissection workshop june 2008 AGH, Pittsburgh
5. minimally invasive endoscopic pituitary and skullbase surgery September 2008 AGH, Pittsburgh
6. microscopic and endoscopic approaches for the skull base work shop October 2008
7. 78th AANS annual meeting- Philadelphia.PA, USA. 1-5 may 2010
8. The first annual scientific meeting of Department of neurosurgery, Benha University on HYDROCEPHALUS updating knowledge in 8 may 2012.
9. The 3rd seminar and 2nd live work shop on interventional management of neurovascular diseases, Egypt Air Hospital 2 march 2012.
10. Theoretical and practical aspects of cranial neuroendoscopy course. Hands on Workshop. Triumph hotel and El-Sahel Teatching Hospital, Cairo, 13-15th March, 2012.
11. The annual medical meeting of Benha Faculty of Medicine, 25-28th September, 2012, Benha, and Ain Elsokhna.
12. The 2nd annual scientific meeting of Department of neurosurgery, Benha University on Sellar and Suprasellar lesions, 25-26th April, 2013. Ain Elsokhna.
13. The Quarter Annual Scientific Meetingof Department of Neurosurgery, Benha University on "Spinal Fixation", 26th February, 2013.
14. The 4rd Annual Meeting of Egyptian Spine Association, Sharm El Sheikh, Egypt, 5th-7th november 2014.
15. 4th neurosurgical update conference, park hyatt jeddah, Kingdom of Saudi Arabia, 10-12 march, 2014.
16. Annual conference of neurosurgery department mansoura university in collaboration with ESNS, skull base surgery, 17 april 2014.
17. The 4th Annual Scientific Meeting of Department of Neurosurgery, Benha University on "Cranial Endoscopy", 30th October, 2014.
18. 2nd annual conference of neurosurgery department kasr al ainy medical school, the walter E. Dandy Egypt chapter part II, 11 and 12 December, 2014.
19. The 37th annual meeting of the of Egyptian Society of Neurological Surgeons (ESNS) recent trends in neurosurgery, Fairmont Heliopolis towers cairo, 7-9 march 2014.
20. 1st annual meeting of neurosurgery department menoufia university in collaboration with ESNS, 28 may 2015.
21. The 3rd Periodic meeting of the Egyptian Spine Association (ESA), at Banha Neurosurgery Department. 27th August 2015, Benha.
22. The 38th annual meeting of the of Egyptian Society of Neurological Surgeons (ESNS) neurosurgery pearls and pitfalls, Hurghada Egypt, 25- 27 march 2015.
23. The 38th Annual Meeting of Egyptian Society of Neurological Surgeons (ESNS) (Neurosurgery Pearls and Pitfalls), March 25-27th, 2015.
24. The 3rd annual conference of Neurosurgery and Spine Center at Al Galaa Medical Compound, 14-15th January 2016, Cairo.
25. The first course of Stereotactic and Functional Neurosurgery, held by the Egyptian Society of Neurological Surgeons(ESNS), and Ain Shams University. 10th March, 2016. Cairo.
26. The 39th Annual Meeting of Egyptian Society of Neurological Surgeons (ESNS) (Neurosurgery: Reality and Hope), March 23-26th, 2016, Luxor, Egypt.
27. 3rd ISMINS international congress on minimally invasive neurosurgery. Cairo contemporary MIN, 18-21 October 2016.
28. The 28th interim meeting of Egyptian Society of neurological surgeons in collaboration with Alexandra neurosurgery department, 19th–21st September 2018, porto Marina Hotel, North Coast, Alexandria, Egypt.
29. The 12th annual microscopic and endoscopic skullbase surgery course and vascular bypass lab, Allegheny General Hospital, Pittsburgh, Pennsylvania, United States of America, November 15th. 2018 –17th November
30. The 42nd Egyptian Congress of neurosurgery 27th –29th March 2019, Cairo, Egypt.
31. The Fifth minimally invasive neurosurgery course, neurosurgery updates cranial and spine, September 4–6, 2019, Cairo EGYPT at National Training Intitute; Cranial Course.
32. The Fifth minimally invasive neurosurgery course, neurosurgery, updates cranial and spine, from September 4–6, 2019, Cairo, Egypt, National training Institute, endoscopic skull base course.
33. The 29th interim meeting of the Egyptian Society of neurological surgeon 2019 in collaboration with Alexandra

neurosurgery department, Sheraton Montazah hotel, Alexandria, Egypt. October 4th –6th, 2019.

34. The 13th annual microscopic and endoscopic skull base surgery course and vascular bypass lab, November 14- 16, 2019, Allegheny, General Hospital, Pittsburgh, Pennsylvania, United States of America.
35. The First international integrated conference (ninth annual medical conference of Benha, faculty of medicine), revolution of integrated medicine, present and future, 10th– 11th Cairo Egypt.
36. The 43rd Egyptian Congress of neurological surgery conference, 22nd March to 24th March 2022. Cairo, Egypt.
37. The Annual conference of neurosurgery department, Mansoura Faculty of Medicine in collaboration with Egyptian Society of Neurological Surgeons. Updates in pediatric neurosurgery, 19th May 2022. Egypt.
38. The 42nd annual conference of Alexandria neurosurgery department, 14th– 16th September 2022, in borg El Arab Hotel, Alexandria, Egypt.
39. The third Congress of the Mediterranean Association of Neurological Surgeons (MANS), Cairo, Egypt, December 13–15, 2022 organized under the patronage of the World Federation of Neurological Societies (WFNS).

Training Courses and Workshops:

- Hands on workshop of cranial neuroendoscopy course, Triumph Hotel, and Elsahel Teaching Hospital, 13-15th March, 2012.
- Hands on work shop on posterior lumber spinal fixation held by Banha Neurosurgery Department, at Banha Faculty of Medicine, 26 February 2013.
- Hands on Workshop in Cranial endoscopy, held by Benha Neurosurgery Department Palmira resort, El Sokhna, 25-26th April 2013.
- The 2nd work shop and live cases presentation on Endoscopic Sinus and Skull Base Surgery, held by ENT Depatment at Benha University Hospital, 9-12th February, 2013.
- Workshop on "Advances in Spinal Instrumentation" Benha University, Dept. of Neurosurgery, December 2014.
- The 5th work shop and live cases presentation on Endoscopic Sinus and Skull Base Surgery, held by ENT Depatment at Benha University Hospital, 7-10 February 2015 .
- Faculty member in the ninth annual microscopic and endoscopic skull base surgery course and vascular bypass animal lab held at Allegheny General Hospital, Pittsburgh, PA, USA during 4-7 November 2015.
- The work shop on stereotactic techniques during the first course of Stereotactic and Functional Neurosurgerym held by ESNS and Ain Shams University, 10th March, 2016.
- The Training Program "statistical analysis using SPSS", Information and Communications Technology Project (ICTP), Benha University, 30-1-2017.

Research interests:

- Endoscopic transsphenoidal surgery for sellar& suprasellar lesions;
- Minimally invasive approaches to skull base lesions;
- Endoscopic cranial surgery;
- Congenital pediatric neurosurgery;
- Neurotraumatology;
- Cord tumors.

Teaching Experience:

Microneurosurgery and Skullbase Laboratory
The University of Drexel and Allegheny General Hospital Pittsburgh PA, USA. Microsurgical Laboratory is a premier education and research facility. It is also recognized, nationally and

internationally, as a premier facility in the world for skull base surgical training and education. The primary goal of the laboratory is to provide a setting for a neurosurgeon to become skilled with microsurgical instrumentation and to learn surgical anatomy, particularly as viewed through the surgical microscope or the endoscope. I gained three-dimensional orientation in my mind's eye by simulating surgeries as well as endoscopic anatomy of the skullbase.

International publications:

1. Abdel Aziz KM, Bhatia S, Tantawy MH, Sekula R, Keller JT, Froelich S, Happ E. Minimally invasive transpalpebral "eyelid" approach to the anterior cranial base. Neurosurgery. 2011 Dec;69(2 Suppl Operative):ons195-206; discussion 206-7.
2. Alkhalili K, Tantawy M, Nageeb MM, Ragaee MA, Alshyal GH, Alcindor DS, Chen DA, Aziz KM. Role of squamosal suture as a consistent landmark for middle fossa approach craniotomy: an anatomical study. J Neurol Surg B Skull Base. 2015 Feb;76(1):35-8.
3. Aldahak N, El Tantawy M, Dupre D, Yu A, Keller JT, Froelich S, Aziz KM. Drilling of the marginal tubercle to enhance exposure via minipterional approach: An anatomical study and clinical series of 25 sphenoid wing meningiomas. Surg Neurol Int. 2016 Dec 12;7(Suppl 40):S989-S994.
4. Alaa A. Farag, Mohamed H. El Sayed and Mohamed A.S. Osman. The failure rate of short and long segment fixation of post traumatic thoracolumbar fractures. Nature and Science 2016;14(9).p 147-149 Mohammed

National publications

1. Pure Endoscopic Endonasal Surgery for Pituitary Adenomas, Technique and Early Results in Banha Neurosurgery Department, Oral talk in the 38th annual meeting of the Egyptian Society of Neurological Surgeons 25-27th March 2015, It is accepted in Medical Cairo University Journal at 30/12/2017.
2. Pedicle Subtraction Osteotomy in Treatment of Posttraumatic Kyphosis. accepted in Egyptian Spine Journal at 17/12/2016.
3. Carpal Tunnel Syndrome: Evaluation of its provocative clinical tests accepted in Egyptian Neurosurgery Journal at 25/10/2017.
4. Three and Four Levels Anterior Cervical Discectomy and PEEK Cage Fusion Alone In Treatment of Cervical Degenerative Radiculomyelopathy. Speaker in the joint 11th Asian Pacific Cervical Spine Society (APCSS) and 7th Egyptian Spine Association (ESA) Annual Meetings, November 8-10th, 2017, Cairo, Egypt. It is accepted in Medical Cairo University Journal at 4/11/2017.
5. Frontoorbital advancement and forehead remodeling for correction of anterior calvarial craniosynostosis, surgical technique and results in low economic facilities: Benha Experience, accepted in Medical Cairo University Journal at 4/11/2017.
6. Endoscopic Fenestration of Multiloculated Post-infectious Hydrocephalus. It is accepted in Medical Cairo University Journal at 1 /1/2018.
7. Endoscopic interlaminar discectomy using simple technique without the use of complicated industrial tubular systems .It is accepted in Medical Cairo University Journal at 1 /1/2018.
8. The natural course of incidental intracranial meningiomas: systematic review and meta-analysis. It is accepted in International Journal of Advanced Research at 1 /1/2018.
9. Evaluation of Bone Fusion and Clinical Outcome of a Stand-Alone Polyether Ether Ketone Cage Filled with Biphasic Calcium Phosphate Used in One Level Anterior Cervical Discectomy and Fusion, Zagazig University Medical Journal Accepted 22 December 2020, printed November 2022 Volume 28, Issue 6 (1505-1513)
10. Laparoscopic Assisted Insertion of Thecoperitoneal Shunt, Simple Technique in a Single Institution Experience, and Comparison with Traditional Minilaparotomy. Zagazig University Medical Journal Accepted 7 July 2021, printed November 2022 Volume 28, Issue 6)1494-1504.
11. Evaluation of Intradural Extramedullary Spinal Tumors Management: Single Institutional Experience, The Egyptian Journal of Hospital Medicine, accepted in 18 August 2022. For publish in (October 2022) Vol. 89, Page 5317- 5322.
12. PREDICTING FACTORS OF THE OUTCOME OF CEREBRAL AVMs TREATED WITH ENDOVASCULAR EMBOLIZATION FOLLOWED BY GAMMA KNIFE RADIOSURGERY, The Medical Journal Cairo University, Accepted: 30/08/2022 to be published December2022
13. VALIDITY OF CORTICAL BONE TRAJECTORY SCREWS TO STABILIZE THE LUMBAR SPINE IN OSTEOPOROTIC PATIENTS, The Medical Journal Cairo University, Accepted: 30/08/2022 to be published December2022

14. Microsurgical Decompression of C2 Nerve and Ganglion as a Treatment Option for Occipital Neuralgia with Migraine, The Egyptian journal of hospital medicine Accepted: 15/09/2022 Printed (October 2022) Vol. 89 (2), Page 6809- 6815 Accepted and presented as an oral presentation during the 3rd Congress of the Mediterranean Association of Neurological Surgeons (MANS) in Cairo, Egypt on December 13-15,2022
15. Factors Affecting the Outcome of Surgical Management of Atypical Meningiomas, The Egyptian journal of hospital medicine, Accepted: 05/11/2022To be published (January 2023) Vol. 90, Page 226-235
16. Evaluation of Connecting a Fourth Ventricular Catheter with Y Connector to a Previous Ventriculoperitoneal Shunt, as a Treatment Option for Patients with Symptomatic Trapped Fourth Ventricle. The Egyptian journal of hospital medicine, Accepted: 24/12/2022,To be published (January, 2023) Vol. 90 page 300-307.

References

- Sayed EL Gindi. FRCS
  Professor of Neurosurgery Medical Military Academy. Honorary president of WFNS. 13 Abdel Kadder Hamdy, EL Hay EL Khames, Heliopolis, Cairo, Egypt.
- Samir El-Molla, FRCS
  Professor of Neurosurgery Neurosurgery Department Ain Shams University Faculty of Medicine, Abasia, Cairo, Egypt.
- Alaa Abdel-Hay, MD
  Professor and Chairman of Neurosurgery, Neurosurgery Department, Ain Shams University, Faculty of Medicine, Abasia, Cairo, Egypt.
- Adel El-Hakim, MD
  Professor of Neurosurgery, Neurosurgery Department, Ain Shams University, Faculty of Medicine, Abasia, Cairo, Egypt.
- Hossam El Husseiny Khalil, MD
  Professor of Neurosurgery, Neurosurgery Department, Ain Shams University, Faculty of Medicine, Abasia, Cairo, Egypt.
- Magdy El-Kalliny, MD
  Professor of Neurosurgery, Somerset, Kentucky.
  Tel: (606) 678-9617, Fax: (606) 678-9619
- Prof.. Dr. Ali Kotb
  (prof. of neurosurgery Ain Shams University), Fellowship & trained in skull base surgery under supervision of Prof. Dr. Madjid Samii in Hannover,Germany. Email:alikotb@hotmail.com
- Prof. Dr Khalid El bahy
  (prof of neurosurgery Ain Shams University), Fellowship & trained in skull base surgery under supervision of Prof Dr Hakuba in Osaka, Japan. Email:khaledbahy@yahoo.com
- Prof.Dr. Khaled Aziz
  Khaled Aziz, MD, PhD, Professor of Neurosurgery, Drexel University College of Medicine
  Director of Division for complex Intracranial Surgery Department of Neurosurgery
  Phone No. 412 359 6200
- Prof. Hae-Dong Jho MD,PhD
  Professor of Neurosurgery, Drexel University College of Medicine, Director of Jho institute for minimally invasive endoscopic surgery Department of Neurosurgery,Allegheny General Hospital Pittsburgh PA, USA, Phone No. 412 359 6200
- Prof Douglas Chin, MD
  Drexel University College of Medicine, Director of Pittsburgh Ear division, Department of Neuro otology, Allegheny General Hospital Pittsburgh, PA, USA, Phone No. 412 359 6200

VOLKER HÖMBERG
GERMANY

Prof. Hömberg had his medical education at the Universities of Düsseldorf, Freiburg and Boston Massachusetts. After spending electives in Neurology at Boston City Hospital and the National Hospital for Nervous Diseases Queens Square London, he was a research fellow at the C. and O. Vogt Institute for Brain Research in Düsseldorf. In 1981 he started a residency in neurology with Prof. Hans Freund at Heinrich Heine University Düsseldorf. In 1987 he was appointed Director of the Neurological Therapy Centre (NTC) a newly founded Institute at Heinrich Heine University in Düsseldorf. He was also founding Director of the NTC in Cologne. He was involved in the setup of many in- and outpatient rehabilitation hospitals in Germany and abroad. In 2001 he started the St. Mauritius Therapy Clinic in Meerbusch near Düsseldorf. From 2011 to February 2022 he was Medical Director and Head of Neurology of the Dept. of Neurology at the Gesundheitszentrum Bad Wimpfen and works as senior neurology advisor for the SRH-Group, one of the biggest hospital groups in Germany.

He was founder, president and vice president of the German Society for Neurorehabilitation for many years. He served as Secretary General for the World Federation of Neurorehabilitation (WFNR), for more than 15 years and was elected President Elect of WFNR in 2020, taking over the presidency in 2022. He is vice president of the European Federation of Neurorehabilitation Societies (EFNR). He received an honorary doctorate from the Medical University of Cluj in 2017. In 2022 he was elected as corresponding member by the Japanese Society of Physical Medicine and Rehabilitation. He is honorary member of the Romanian Society for Neurorehabilitation, the German Society for Clinical Neurophysiology and Neurorehabilitation and of the Society for Neuroprotection and Neuroplasticity (SSNN).

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

He is regular (co-) programme chairman for neurorehabilitation for major international meetings as the World- and European Neurorehabilitation Congresses (WCNR, ECNR).

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

ROVSHAN KHALILZADA
AZERBAIJAN

Summary
Efficient doctor & researcher with 20 years of experience in Neurosurgery and academic leadership. Exceptional at relationship-building, agenda management and high-level decision making. Seasoned chairperson with superb criticalthinking skills and background driving success for boards of varying levels.

Skills
- Peer Collaboration
- Academic Counseling
- Academic Advisory
- Tutoring
- Public Speaking
- Class Lecturing
- Student Recruitment
- Research Writing
- Conflict Resolution

Experience
Department of Neurosurgery, Azerbaijan, Medical University | Baku, Chairman & Ass.Prof.
03/2019 - Present
- Delivered course lectures using modern technology to enhance student comprehension.
- Administered and graded tests and assignments to evaluate student performance and monitor progress.
- Used exams, quizzes and projects to assess how well students grasped learning material and concepts.
- Supervised dissertational research work to assist research publication process.
- Directed operating room team of 17 medical staff during surgeries.
- Completed high-volume surgeries with 96% positive outcome.
- Monitored patients recovering from various treatments.

Department of Neurosurgery, Azerbaijan, Medical University | Baku, Associate Professor
12/2013 - 03/2019
- Sought training in effective teaching methods to reach upper-level undergraduate students.
- Supervised work of postgraduate students by assisting with paper publishing and supporting research.
- Maintained 45 credit hour lecturing schedule and 60 credit hour academic course load.
- Identified promising students to take on assistantships for research initiatives.
- Examined patients to check for relevant medical conditions that could pose surgical risks.
- Operated on patients to correct neurological and spinal deformities, repair injuries, restore functions and prevent and treat diseases.
- Diagnosed and treated nervous system injuries or problems and performed non-invasive, minimally invasive and invasive complex spinal surgical procedures to restore patient health.
- Continuously developed and tested surgical techniques to improve procedures and outcomes.
- Directed operating room team of 14 medical staff during surgeries.

Department of Neurosurgery, Azerbaijan, Medical University | Baku, Assistant to Neurosurgery Department, 12/2002 - 12/2013

- Undertook various administrative responsibilities as required and monitored assessments of progress, student attendance and teaching quality.
- Proposed and implemented research focused on the prognosis of outcomes for hemorrhagic stroke surgery .
- Synthesized large amounts of information to support research efforts.
- Discussed effective research protocols and procedures to minimize errors.
- Discussed research summaries with senior academic staff to monitor progress.
- Produced well-written and thoroughly vetted research papers for industry journals.

Education and Training

Azerbaijan Medical University, Department of Neuro | Baku
M.D.
10/2000

- Completed continuing education in Neurosurgery
- Completed professional development in Neurosurgery

Azerbaijan Medical University | Baku
High School Diploma
06/1995

- Cum laude graduate

Languages

- Turkish: First Language
- English: C2, Proficient
- Russian: C2, Proficient

Accomplishments

- Individual Member of European Association of Neurosurgical Societies
- Member of Walter Dandy Neurosurgical Society

JUNG-OOK KIM
SOUTH KOREA

Affiliation: Clinical Assistant Professor, Department of Traumatology, Regional Trauma Center, Gachon University Gil Medical Center, Korea

Education
- M.D., Sungkyunkwan University, Korea

Postgraduate Training
- Internship and Residency, Samsung Changwon Hospital, Sungkyunkwan University, Korea
- Fellowship in Neurosurgical Trauma, Ulsan University Hospital, Korea
- Fellowship in Critical Care Medicine, Seoul National University Hospital, Korea

Academic Appointment
- Clinical Assistant Professor, Department of Trauma Surgery, Regional Trauma Center, Gachon University Gil Medical Center

Board Certification & Licenses
- Subspecialty Board Certification in Critical Care Medicine
- Certified Neurocritical Care Specialist

SIRAPHOP KRONGCHAI
THAILAND

1ST year neurosurgery resident, Phramongkutklao Hospital, Bangkok, Thailand.

MD:	Faculty of Medicine Chiang Mai University
Internist:	Mae Sot Hospital
2023-2024:	Phop Phra Hospital

WITSANU KUMTHORNTHIP
THAILAND

Dr. Witsanu Kumthornthip received his Medical Doctor Degree and the certified board of rehabilitation medicine from the Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand. After his physical medicine and rehabilitation training in Thailand, he was accepted as clinical visiting fellow at Hunters Moor Regional NeuroRehabilitation Centre which was affiliated with the University of Newcastle, Newcastle upon Tyne, UK. He also got the certificate of NeuroRehabilitation from there. Upon his return in 2000, he started work at the Botulinum Toxin and Spasticity Clinic at Siriraj Hospital. He has been invited as a speaker in a number of lectures, conferences and workshops both locally and internationally including the World Congress of NeuroRehabilitation (WFNR), Asia-Oceanian Congress of NeuroRehabilitation (AOCNR), Asia-Oceanian Congress of Physical and Rehabilitation Medicine (AOCPRM). Also, he is a member of the flying faculty of the WFNR as a speaker for education and training in neurorehabilitation. Recently, he has been organizing the ASEAN Ixcellence® Botulinum Toxin Injection Training Courses for Adult Spasticity for regional botulinum toxin injectors at Siriraj Hospital, Mahidol University, since June, 2023. The next one will be in October 2025. Furthermore, he has annually organized an in-house hands-on workshop for PM&R resident trainees called Academic Botulitumtoxin Class (ABC) workshop.

He is mostly dedicated to neurological rehabilitation regarding stroke, acquired brain injury, degenerative spine, in particular spasticity and dystonia treatment with botulinum toxin injection, motor rehabilitation including robotics and advanced rehabilitation technology, as well as musculoskeletal pain management. He has had several teaching experiences at Faculty of Medicine Siriraj Hospital, Mahidol University, Sirindhorn School of Prosthetics and Orthotics, Princess Galyani Vadhana Institute of Music, Silpakorn University, Srinakharinwirot University, for example. He teaches students and specialists at both undergraduate and postgraduate levels including medical students, resident trainees in physical medicine and rehabilitation, other medical specialists, physiotherapists, nurses, prosthetics and orthotics students, music students as well as master degree & PhD program in neurosciences, regarding his dedicated fields of interest. Dr. Witsanu Kumthornthip is an Assistant Professor and was the Chairman of the Department of Rehabilitation Medicine (2 terms during the year 2015-2019 & 2019-2023), Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand. He is the Immediate Past-President and a counselor of the Royal College of Physiatrists of Thailand and Thai Rehabilitation Medicine Association. He is also the Regional Vice-President of the World Federation for NeuroRehabilitation (WFNR), Southeast Asia. Lately, he has just been taking the position of Secretary General of Asia-Oceanian Society of NeuroRehabilitation.

He is a member of several medical societies including Medical Council of Thailand, Medical Association of Thailand, the Royal College of Physiatrists of Thailand, Thai Rehabilitation

Medicine Association, Thai Society of NeuroRehabilitation (TSNR), Thai Association for the Study of Pain, International Society of Physical and Rehabilitation Medicine (ISPRM), World Federation for NeuroRehabilitation, Asia-Oceanian Society of NeuroRehabilitation, Asia-Oceanian Society of Physical and Rehabilitation Medicine. He is also the founding President of the TSNR.

He has had experienced in organizing some international congresses including the Congress Chairman of the Asian Congress of Neurorehabilitation 2010, the Secretary General of the 4th Association of Southeast Asian Pain Societies (ASEAPS) Congress 2011, the Scientific Chairman of the 4th Asia-Oceanian Conference of Physical and Rehabilitation Medicine 2014 (AOCPRM2014), and most recently, the Congress Chairman of the 5th Asia-Oceanian Congress of NeuroRehabilitation 2023 (AOCNR2023) which was held in Bangkok during 13-16 December 2023, for example.

Dr. Witsanu Kumthornthip has several textbook chapters and research publications. He has experience as an investigator and co-author in either local or international studies such as:

- The effectiveness of body weight support treadmill training with a gait driven orthosis (Lokomat®) in stroke patients during rehabilitation phase: a pilot study. J Thai Rehabil Med 2008; 18(3): 78-84.
- Combined ablative neurosurgical procedures in a patient with mixed spastic and dystonic cerebral palsy. Stereotact Funct Neurosurg 2010; 88(3):187-92.
- Current considerations for the management of musculoskeletal pain in Asian countries: a special focus on cyclooxygenase-2 inhibitors and non-steroid anti-inflammation drugs. Int J Rheum Dis 2012; 15(4):341-7.
- Improvement of Sitting Ability and Ambulation Status after Selective Peripheral Neurotomy of the Sciatic Hamstring Nerve together with Obturator Branches for Severe Spasticity of the Lower Extremities. Stereotact Funct Neurosurg 2012; 90(5):335-343.
- Botulinum toxin injection for hypertonicity of the upper extremity within 12 weeks after stroke: a randomized controlled trial. J Neurol Rehabil 2012; 26(7):812-21.
- Feasibility of Video Clip Analysis on Effect of Botulinum Toxin-A Injection for Post-Stroke Upper Limb Spasticity. Toxins 2013, 5, 983-91.
- Utilization of intraoperative electromyography for selecting targeted fascicles and determining the degree of fascicular resection in selective tibialneurotomy for ankle spasticity. Acta Neurochir (Wein). 2013; 155(6):1143-9. doi: 10.1007/s00701-013-1686-0.
- Surgical Outcomes of Microsurgical Selective Peripheral Neurotomy for Intractable Limb Spasticity. Stereotact Funct Neurosurg. 2013;91(4):248-57. doi: 10.1159/000345504.
- A Comparison of Immediate Effect of Neurophysiologic versus Orthopedic Stretching in Reducing Post-stroke Upper Limb Spasticity (ENOS-PULS): a Preliminary Study. J Thai Rehabil Med 2015; 25(1): 22-29.
- Early abobotulinumtoxinA (Dysport®) in post-stroke adult upper limb spasticity: ONTIME pilot study. Toxins 2018;10(7), 253. doi:10.3390/toxins10070253.
- Effectiveness of back exercise and education for lower back pain prevention among nurses at a tertiary hospital in Bangkok, Thailand. Siriraj Medical Journal 2020;7(2):109-116.
- Impact of COVID-19 on medical rehabilitation services, education and research in Thailand. ASEAN J Rehabil Med 2022;32(2):50-3.

- Cheewadhanaraks S, Kumthornthip W, Sangchay N. Proposed potential anatomical landmarks for percutaneous botulinum toxin injection in anterocollis-typed cervical dystonic patient: A pilot study utilizing Thiel-embalmed human cadavers. Siriraj Med J 2022; 74: 409-424.
- Rosales RL, Chia NVC, Kumthornthip W, Goh KJ, Mak CS, Kong KH, Ng YS, Chou LW, Flordelis MJ, Do T, Maisonobe P, Li LSW and Suputtitada A (2024) Botulinum toxin A injection for post-stroke upper limb spasticity and rehabilitation practices from centers across Asian countries. Front. Neurol. 15:1335365. doi: 10.3389/fneur.2024.1335365.
- Kumthornthip W, Tassatarn S, Chotiyarnwong C. Does Early Rehabilitation Admission Improve Functional Outcomes of Stroke Patients after a Short Hospital Stay? A Thai Retrospective Study on 596 Patients. J Med Assoc Thai 2024;107:1013-20. DOI:10.35755/jmedassocthai.2024.12.1013-1020-00664.
- Botulinum toxin type A for the treatment of patients with post-stroke spasticity in Thailand: cost-utility and budget impact analysis. Hadnorntun, P., Prawjaeng, J., Kongmalai, T., ... Kumthornthip, W., Leelahavarong, P. BMJ Open, 2025, 15(1), e090701.

PETER LACKNER
AUSTRIA

Prof. Dr. Peter Lackner is the head of the Department of Neurology at Klinik Floridsdorf, Vienna Healthcare Group, 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. Prof. Lackner 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, Loma Linda University, California, USA. He was 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. Importantly 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 Klinik 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 Klinik Floridsdorf. He is member of several local and international societies for Neurology, Neurorehabilitation and Neurocritical Care and currently the co-chair of the Austrian Society of Neurorehabilitation.

GUILLERMO V. LIABRES
THE PHILIPPINES

EDUCATION

2007 - 2011
University of Santo Tomas Faculty of Medicine and Surgery, Espana Manila
Doctor of Medicine - Benemeritus

2002 - 2007
University of Santo Tomas College of Rehabilitation Sciences, Espana Manila
Bachelor of Science in Physical Therapy

1997 – 2002
San Beda College Mendiola Manila
High School

1992 – 1997
San Beda College Mendiola Manila
Grade School

CLINICAL EXPERIENCE

December 2021
Inducted as Fellow, Academy of Filipino Neurosurgeons, Inc.

March 2019 – June 2020
International Fellow (Clinical and research), Cerebrovascular Neurosurgery
Seoul National University Bundang Hospital - Gumi-dong, Bundang, Seongnam, Gyeonggi-do, South Korea
Graduated HD (Honors with Distinction)

December 2018
Inducted as Diplomate, Philippine Board of Neurological Surgery

March – May 2018
Clinical preceptorship as Visiting Scholar Department of Neurosurgery University of California San Francisco March to May 2018: Neurosurgical Oncology and Vascular Neurosurgery

2014 – 2018
Department of Neurosciences, Section of Neurological Surgery, Makati Medical Center
Chief Resident 2016 – 2018
2018 Mariano M. Alimurung Most Outstanding Resident

2013 – 2014
Medical Officer III/General Surgery Resident – Department of Surgery, Bicol Medical Center
Bicol Expanded Surgical Training (B.E.S.T.) training program

2011 – 2012
Medical Internship – University of Santo Tomas Hospital

2010 - 2011
Medical Clerkship - University of Santo Tomas Hospital

HOSPITAL AFFILIATIONS/ POSITIONS

- Makati Medical Center – Associate Active Consultant I, Quality Assurance Officer, Board of Directors Institute of Neurological and Behavioral Sciences
- Medical Center Manila – Section Chief (Neurosurgery), Active Consultant
- The Medical City Ortigas – Active Consultant 2
- Cardinal Santos Medical Center – Active Consultant, Clinical Director – Neurovascular Center
- Asian Hospital and Medical Center – Active Consultant
- Quirino Memorial Medical Center – Medical Specialist II PT, Training officer – Neurosurgery Residency Training Program
- Rizal Medical Center – Medical Specialist I PT , Member NS training committee
- St. Luke's Medical Center – Global City – Visiting Consultant
- Lucena Doctors Hospital – Visiting Consultant
- Medical Center Western Batangas – Active Consultant
- The Medical City Clark Pampanga – Active Consultant

SURGICAL MILESTONES

- Performed the first successful brain bypass surgery in Makati Medical Center (2020)
- Performed the first successful high flow brain bypass surgery in Quirino Memorial Medical Center (2024)
- Performed the first successful brain bypass surgery in Medical Center Manila (2021)
- Performed the first successful "double barrel" brain bypass procedure in Medical Center Manila (2021)

- Performed the first successful posterior circulation bypass surgery in Medical Center Manila (2021)
- Performed the first successful brain bypass surgery in The Medical City, Ortigas (2020)
- Performed the first successful brain bypass surgery in East Avenue Medical Center (2023)
- Performed the first successful brain bypass surgery in Asian Hospital and Medical Center (2023)
- Performed the first successful indirect bypass surgery in Rizal Medical Center (2024)
- Performed the first successful posterior circulation bypass surgery in Cardinal Santos Medical Center (2023)
- Currently, performed 60 brain bypass cases in the whole country with 100% patency rate

RESEARCH

Publications

1. Use of Intraoperative CO2 Laser for the Resection of a Ventral Intradural Extramedullary Cervical Spinal Tumor: 2-Dimensional Operative Video
   Joseph A Osorio, MD, PhD, Guillermo Victorino T Liabres, MD, Catherine A Miller, MD, Michael W McDermott, MD, Praveen V Mummaneni, MD
   Operative Neurosurgery, Volume 18, Issue 5, May 2020, Page E161, https://doi.org/10.1093/ons/opz171

Ongoing Researches

1. Angiographic and clinical outcomes of treatment for complex intracranial aneurysms according to treatment modalities with review of related literature
2. The RBL Tap™: Ventricle Targeting Apparatus

Our team has devised a simple surgical apparatus that aids targeting of the ventricles using Dandy's Principle.

3. Post-craniotomy Pain: A study on the prevalence, severity and risk factors

This study aims to determine the prevalence of post craniotomy pain on all patients operated in Quirino Memorial Medical Center from 2016 – 2017.

2018
A Meta-Analysis Investigation on the Effects of Lamina Terminalis Fenestration on the Reduction of Shunt Dependent Hydrocephalus and Symptomatic Vasospasm after Aneurysmal Subarachnoid Hemorrhage
Finalist: Academy of Filipino Neurosurgeons Annual research paper presentation

2015
Endoscopic Third Ventriculostomy With Biopsy For Pineal Region Tumors: An Institutional Case Series And Review Of Literature

2014
A Retrospective study of the Incidence and Predictors of Cranioplasty Infection After Decompressive Craniectomy: The Makati Medical Center Experience
Third Place: Neurosciences research paper presentation
Participant, Makati Medical Center Interdepartmental Research Paper presentation

2013
Ictus Apoplepticus: A case report of a convexity meningioma presenting as an acute stroke
Finalist: Interesting case presentation Bicol Medical Center

2012
Confidence in performing core clinical skills: a survey of trainees completing post-graduate internship training at University of Santo Tomas Hospital
Best Paper University of Santo Tomas Post Graduate Interns' Paper presentation

Determined the confidence that post-graduate interns of University of Santo Tomas Hospital (USTH) had in performing core clinical skills and the extent to which they had been exposed to them during training

2007
Center for Research on Movement Science
Work-related musculoskeletal disorders in professional Filipino physical therapists working in UST-CRS affiliated centers: Prevalence, severity, risks & responses
Best paper and poster Annual UST PT Interns' paper presentation

Determined the 12-month prevalence of work-related musculoskeletal disorders among professional Filipino physical therapists working in different centers affiliated to UST-CRS, their severity, the risk factors and their responses to injury.

OTHERS

- Chapter Author: C1 – C2 Fusion, Masters of Neurosurgery – Hall of Fame Edition 2018
- Course Director – Tips And Clips of aneurysm surgery clipping, Aesculap Academy 2023

SPECIAL TRAINING

- Minimally Invasive Parafascicular Surgery for Hematomas and Tumors, April 2024 – Singapore Tan Tock Seng Hospital
- Philippine Heart Association BLS – ACLS training course, February 16, 2021
- 4th Asia Pacific Microanastomosis workshop for Neurosurgeons – Seoul National University South Korea (October 22 – 24, 2019)
- NIDA Clinical trials network Good Clinical Practice Online Course, January 20, 2019
- American Heart Association Basic Life Support, Advanced Cardiac Life Support Training last October 24-25, 2018 by the UST – FMS Life Support Training Center done at Early Intervention Management, Inc. training site

- Good Clinical Practice Workshop and Training provided by the Philippine Clinical Research Professionals, Inc. in coordination with Makati Medical Center Department of Neurosciences held in Makati Medical Center, January 10, 2017
- 3rd Cardinal Santos Spine Center Workshop: Nuances of Spine Surgery held in Cardinal Santos Medical Center last March 31, 2017 – April 1, 2017
- The Brigham and Harvard Lectures in Clinical Neurology and Neuroanatomy 2017 at St. Luke's College of Medicine Angelo King Auditorium, September 28 – 30, 2017
- The Medical City Endoscopic Skull Base Workshop July 16 – 17, 2015

ACTIVITIES & SERVICE

2007 - present
Sigma Beta Tau Fraternity (TITANS) – University of Santo Tomas Faculty of Medicine and Surgery
Scribe – 2009
TITAN guard – 2008

A medical fraternity dedicated to helping its brothers to become competent, compassionate and committed Thomasian physicians with its ultimate goal of serving our fellow men in the art of Medicine.

2011 – present
Philippine TITANS Alumni Association
Member

An association of TITAN alumni with the same ideals and aspirations of its rooted fraternity.

2007 – 2011
UST Faculty of Medicine and Surgery Pautakan Team
Captain

A core group of selected Medical students competing on various medical and non-medical quiz bees in and out of the university.

2008 – 2011
SULO – the official publication of UST Faculty of Medicine and Surgery
Executive Editor 2008 – 2010

2008 – 2010
UST Faculty of Medicine and Surgery Student Council
2009 – 2010 – Internal Vice president
2008 – 2009 – Secretary

2003 – 2007
UST College of Rehabilitation Sciences Pautakan Team Captain

A core group of selected Rehab Science students competing on various quiz bees in and out of the university.

2003 – 2005
Therapeutic Currents – Official Publication of UST College of Rehabilitation Sciences
Section Editor

2002 – 2007
UST Physical Therapy Society
Member

A society of physical therapy students in UST driven to support and empower the students in academic and non-academic pursuits of excellence

PROFESSIONAL AFFILIATIONS

- Fellow, Academy of Filipino Neurosurgeons, Inc
- Philippine Medical Association (Makati Medical Society)
- Philippine Association of Neurosurgical Residents
- Philippine TITANS Alumni Association
- Tomasinong Bikolano
- UST Medical Alumni Association

LYNNE LOURDES LUCENA
THE PHILIPPINES

Dr. Lynne Lourdes N. Lucena, a scholar of the prestigious Nellie-Kellogg Van Schaick Foundation during her Intarmed 7-year medical course at the University of the Philippines College of Medicine has more than 25 years of astounding and expert experience in brain and spinal cord surgery. She is the Founding President of the Neurotrauma Society of the Philippines, a society that advocates for the multidisciplinary management and care of the brain and spinal cord injury patients and is the Vice President of the Academy of Filipino Neurosurgeons. She was the President of the University of the Philippines Faculty and Alumni of the Neurosciences (UPFANS) and was the Chair of the Philippine Board of Neurological Surgeons being the group that certifies and accredits neurosurgeons in the whole country.

Dr. Lucena broke barriers when she went back to her home region Bicol to start her neurosurgical

practice serving around 4 million patients annually. Though she was just 29, and female, she pioneered neurosurgery service there, creating the Neurosurgery Section in two apex government hospitals , the Bicol Medical Center and the Bicol Regional Hospital and Medical Center training surgical residents in the care of patients. As a leading female surgeon, she received the Greg Wilkins Barrick Chair and Visiting International Surgeon Award by the Women in Neurosurgery and American Association of Neurological Surgeons. She is the only Filipina Neurosurgeon to have won this award.

A published researcher and author, she has collaborated on international papers with the United States Department of Defense and Brain Trauma Foundation and other internationally renowned neurosurgeons.

She is the Congress President of the upcoming Asian Australasian Congress of Neurological Surgeons in 2026 in Manila.

Among her other awards are the Leadership Exemplar Award, National Science Development Board Award and an Outstanding President of Rotary.

Her dedication to serve extends beyond neurosurgery as she is recognized to help the abandoned at orphanages and animal shelters. The first 500 copies of her poetry book " Windows to My Soul" was sold to benefit her advocacies.

MAKHKAMJON MAKHKAMOV

UZBEKISTAN

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, 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.

CHRISTIAN MATULA
AUSTRIA

Dr. Christian Matula serves as Professor and Vice-chairman of Neurosurgery at the Neurosurgical Department, Medical University of Vienna, Austria. He represents as the Director of Skull Base Division, Head of the Neurotrauma and Chairman Interdisciplinary Neuroscience. Internationally within the last 5 years he is currently holding the position of Chairman of the Educational & Training Committee AMN (Academy for Multidisciplinary Neurotraumatology), the Founder, Vice President and Member of the Foundation Board of GLOBAL NEURO, an independent foundation aiming to improve quality of life for patients suffering from neurosurgical disorders. He is also holding the position of a member of the Educational Committee of the World Federation of Neurological Surgery (WFNS) and European Association of Neurological Surgeons (EANS). Most currently he serves also as the President of INRO (International Neurotrauma Research Organization. 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 150 workshop and courses worldwide and has given more than 1000 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, atlas but also interactive electronical 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.

WASINEENART MONGKOLPUN
THAILAND

Dr. Wasineenart Mongkolpun is full intensivist at medical and surgical ICU, Sirirajpiyamaharajkarun Hospital, Siriraj Hospital, Mahidol University.

Dr. Mongkolpun completed her medical studies, internal medicine and critical care medicine at Siriraj Hospital, Faculty of Medicine, Mahidol University. She obtained her PhD, critical care from the Erasma Hospital, Faculty of Medicine, University Libre Bruxelles, Belgium. She now works as a researcher in Erasma Hospital.

Dr. Mongkolpun's main fields of research investigation are acute circulatory failure and its treatment, haemodynamic monitoring and heart-lung interactions and post ICU syndrome. She has written several book chapters and didactic reviews, and is the author of numerous scientific articles in peer-reviewed journals.

SOMBAT MUENGTAWEEPONGSA
THAILAND

2003-07-01 to present | Staff (Center of Excellence in Stroke, Thammasat University Hospital), Thammasat University Faculty of Medicine: Pathumthani, TH

Biography

Dr. Sombat Muengtaweepongsa received his MD degree from the Ramathibodi Hospital Mahidol University, Bangkok, Thailand, and completed clinical fellowship training in Cerebrovascular and Critical care Neurology at Saint Louis University, Missouri, USA. Dr. Muengtaweepongsa pursued an Academic career at the Department of Medicine, Faculty of Medicine, Thammasat University, as Professor, Head of the Neurology Division (2008 - 2011), Chairman at the Department of Medicine (2011 – 2018) and Associate Dean for Research and Innovation (2018-now). Dr. Muengtaweepongsa established the Stroke Fast Track and Stroke Unit (2008 - now) at Thammasat University Hospital. He served as Executive Director and Department Head positions focusing on stroke/CNS, thrombosis, and targeted temperature management (TTM). Dr. Muengtaweepongsa is acknowledged as the pioneer of the Stroke Network and Therapeutic Hypothermia for treating Post-Cardiac Arrest and Critical Neurologic Conditions in Thailand. Dr. Muengtaweepongsa is listed on five patents, has more than 20 edited books, and authored and co-authored over 100 publications, of which over 80 were published in peer-reviewed scientific professional journals. Dr. Muengtaweepongsa served on editorial boards of many scientific journals (Journal of Interventional Neuroradiology, Frontiers in Neurology, World Journal of Methodology). In the past five years, Dr. Muengtaweepongsa's work focused on research areas in Cerebrovascular and Critical care Neurology, particularly targeted temperature management and stroke.

Education

2005-08-01 to 2007-09-30 | Clinical Fellowship in Cerebrovascular and Critical care Neurology (Neurology), Saint Louis University: Saint Louis, MO, US

ORCHID ID : https://orcid.org/0000-0003-3715-4428

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), Secretary-General of the Academy for Multidisciplinary Neurotraumatology (AMN), Management Group Member EAN Neurotraumatology Scientific Panel, President-Elect of the Romanian Society of Neurology, President of the Society for the Study of Neuroprotection and Neuroplasticity (SSNN), Chairman "RoNeuro" Institute for Neurological Research and Diagnostic, Corresponding Member of the Romanian Academy, Member of the Academy of Medical Sciences, Romania and secretary of its Cluj Branch. He is member of 17 scientific international societies and 10 national ones, being part of the executive board of most of these societies. Professor Dafin F. Muresanu is also a specialist in Leadership and Management of Research and Health Care Systems ("MBA – Master of Business Administration - Health Care Systems Management, The Danube University - Krems, Austria, 2003"). He has performed valuable scientific research in high interest fields such as: neurobiology of central nervous system (CNS) lesion mechanisms; neurobiology of neuroprotection and neuroregeneration of CNS; the role of the Blood-brain barrier (BBB) in CNS diseases; developing comorbidities in animal models to be used in testing therapeutic paradigms; nanoparticles neurotoxicity upon CNS; the role of nanoparticles in enhancing the transportation of pharmacological therapeutic agents through the BBB; cerebral vascular diseases; neurodegenerative pathology; traumatic brain injury; neurorehabilitation of the central and peripheral nervous system; clarifying and thoroughgoing study on the classic concepts of Neurotrophicity, Neuroprotection, Neuroplasticity and Neurogenesis by bringing up the Endogenous Defense Activity (EDA) concept, as a continuous nonlinear process, that integrates the four aforementioned concepts, in a biological inseparable manner.

Professor Dafin F. Muresanu is coordinator in international educational programs of European Master (i.e. European Master in Stroke Medicine, University of Krems), organizer and co-organizer of many educational projects: European and international schools and courses (International School of Neurology, European Stroke Organisation Summer School, Danubian Neurological Society Teaching Courses, Seminars - Department of Neurosciences, European Teaching Courses on Neurorehabilitation) and scientific events: congresses, conferences, symposia (International Congresses of the Society for the Study of Neuroprotection and Neuroplasticity (SSNN), International Association of Neurorestoratology (IANR) & Global College for Neuroprotection and Neuroregeneration (GCNN) Conferences, Vascular Dementia Congresses (VaD), World Congresses on Controversies in Neurology (CONy), Danube Society Neurology Congresses, World Academy for Multidisciplinary Neurotraumatology (AMN) Congresses, Congresses of European Society for Clinical Neuropharmacology, European Congresses of Neurorehabilitation). His activity includes involvement in many national and international clinical studies and research projects, over 600 scientific participations as "invited speaker" in national and

international scientific events, a significant portfolio of scientific articles (over 300 papers indexed on Web of Science-ISI Core Collection, H-index: 32) as well as contributions in monographs and books published by prestigious international publishing houses. Prof. Dr. Dafin F. Muresanu has been honoured with: Romanian Academy, "Iuliu Hatieganu Award", for the contribution to the second edition of the book: "Repercusiuni miocardice şi coronariene în boli cronice (Miocardic and Coronarian Repercusions in Chronical Diseases)" in 2024; Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca,"Social Responsibility Award" in 2024; „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, "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; 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. In May 2025, Prof. Dr. Dafin F. Muresanu was conferred the honorary membership of the Society of Neurologists of the Republic of Moldova in recognition of exceptional contribution to advancing academic and professional dialogue in the field of neurology. Also, in June 2025, he was conferred the "Service Award" of the European Academy of Neurology (EAN) in recognition for his contribution in his capacity as board member of EAN.

TEWAJETSADA PARUANG
THAILAND

Education:

2021	Maritime and Aquatic Life Support (M.A.L.S.), Naval medical department, Thailand
2014-2016	Clinical Spinal Fellowship, Klinikum Rechts der Isar, Technical University of Munich, Munich, Germany (European Association of Neurosurgical Societies)
2005-2010	Neurosurgery resident, Siriraj Hospital, Mahidol University, Thailand
1997-2003	Doctor of medicine, KhonKean university, Thailand

Current position

- Senior Advisor to the Committee; The National security, Border affairs, National strategy and National reform Committee; Members of the House of Representatives, Parliament
- Advisor to Chairman; Law, Justice and Human Rights Committee; Members of the House of Representatives, Parliament
- Advisor to The Special Committee for Consideration of the Draft Act on Facilitation of Licensing and Service to the Public, Members of the House of Representatives, Parliament
- Subcommittee for Monitoring the Implementation of International Obligations, United Nations Sustainable Development and International Trade and Economic Agreements, Committee on Foreign Affairs, Senate, Parliament
- Subcommittee, Study and find solutions to develop border trade at various types of checkpoints to increase the potential of Thai border trade, Members of the House of Representatives, Parliament
- Advisor to Subcommittee on Police System Reform Studies, Members of the House of Representatives, Parliament
- Advisory Committee, secretary team of Minister, Ministry of Public Health
- Advisory Committee, The Bangkok Metropolitan Council Secretariat
- Medical business consultant, Advisory, Thai Chamber of Commerce
- Neurosurgeon, Brain and Spine unit, Surgery department, Naval Medical Department, Royal Thai Navy, Thailand

DOUNGPORN RUTHIRAGO
THAILAND

Current position

Neurointensivist and Chief of Intensivists at Bangkok International Hospital,
Clinical care program certification working committee for stroke and traumatic brain injury

Workplace

Bangkok International Hospital (BIH)

Education/Training

- M.D.: Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand.
- Thai Board of Internal Medicine: Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand (2013)
- American Board of Psychiatry and Neurology: Texas Tech University Health Sciences Center, Texas, USA (2018)

- American Board of Neurocritical Care: Massachusetts General Hospital/ Brigham and Women's Hospital / Harvard Medical School, Boston, MA, USA (2020)

Expertise
Stroke, Subarachnoid hemorrhage, Traumatic brain injury, Status epilepticus, Cardiac abnormalities related to Neurocritical care conditions, etc.

SIRARUJ SAKOOLNAMARKA
THAILAND

Current position

1996 - present	Consultant Neurosurgeon Phramongkutklao Medical Center, Bangkok, Thailand

Education

2000	Neurosurgery (epilepsy surgery), University of Melbourne at the Austin and Repatriation Hospital, Australia
2000	Pediatric Neurosurgery, Royal Children s Hospital, Australia
1994	Clinical Fellowship in The Department of Neurosurgery Brain Center Singapore General Hospital, Singapore
1993	Neurosurgery, Phramongkutklao Medical Center, Bangkok, Thailand

Professional affiliations
- Director of Cerebrovascular Center Phramongkutklao Hospital, Thailand
- Former President of Royal College of Neurological Surgeon of Thailand
- Former President of Thai Association of Neurovascular Surgeons of Thailand

Area of Expertise
- Epilepsy surgery
- Pediatric Neurosurgery
- Intraoperative Neuromonitoring

THEETHAWAT SATHIRARAT
THAILAND

Address: Emergency and Critical Care Medicine,
Fort Somdej Phranaresuan Maharaj Hospital
E-mail: ichkhun.ts@gmail.com

Education

2015 Doctor of Medicine, Phramongkutklao College of Medicine, Mahidol University
2019 Diploma of the Thai Board of Emergency Medicine, Phramongkutklao Hospital
2023 Diploma of the Thai Subspecialty Board of Critical Care Medicine, Phramongkutklao Hospital

Work experience

2019-2021 Emergency Physician at Fort Somdej Phranaresuan Maharaj Hospital
Field Epidemiology and Management Training (FEMT)
2023-Now Intensivist and Emergency Physician at Fort Somdej Phranaresuan Maharaj Hospital
Chief of Fort Somdej Phranaresuan Maharaj Hospital Sky Doctor Team

Publications & presentation

2019 Explosion incident in Phramongkutklao Hospital. Case series of mass casualties Care, publication.
2023 ROX Index to Predict Successful Extubation in High-risk Postextubation Failure Patients with High-flow Nasal Cannula, oral presentation.

DOREL SĂNDESC
ROMANIA

Present Positions
- General Manager, University County Emergency Hospital Timisoara, Romania
- President, Expert Commission of Anesthesia&Intensive Care (ATI), Ministry of Health
- Vice-Rector, Victor Babes University of Medicine and Pharmacy, Timisoara, Romania
- Professor, Head, Anesthesia and Intensive Care Department, Victor Babes University of Medicine and Pharmacy, Timisoara, Romania
- Past-President, Vice-President, Romanian Society of Anesthesia and Intensive Care

Past Positions
- President, Romanian Society of Anesthesia and Intensive Care
- Council, European Society of Anesthesiology (ESA)
- Executive Committee, World Federation Societies of Anesthesiologists (WFSA)
- Secretary of State (Deputy Minister), Ministry of Health, Romania

Contributions to the Projects of modernization of Anesthesia and Intensive Care in Romania
- The Law regulating on modern principles of the functioning, organization, classification, architecture, admission criteria, human resource and other aspects in Anesthesia and Intensive Care -2009
- A National Program of financing Anesthesia and Intensive Care ("Priority Action Anesthesia - Intensive Care", 2013) that significantly contributed to the rapid modernization of our speciality, nationally and internationally recognized
- Adoption of European standards in education: European Diploma in Anesthesia and Intensive Care (EDAIC) is an official part of the Examination for the title of Specialist in Anesthesia and Intensive Care in Romania
- The SYMLAB Project, with Swiss financing, a national network of modern Training by Simulation Centers in Anesthesia and Intensive Care
- A major, multi-source (World Bank, Government, European Funding, Trans-Border funding, etc) Program of modernization of infrastructure and equipment of Anesthesia and Intensive Care Departments

Contributions to the modernization of other specialities in Romania
- A package of National Programs of financing the care of major pathologies treated in romanian hospitals (Cardiology, Stroke, Trauma, Digestive emergency, Vascular surgery, Neuro- radiology); these programs significantly increased the level of care and determined the drop of in-hospital mortality in major pathologies.

Projects/Campaigns of social involvement

- "Together for life" humanitarian Project, for the development and modernization of Anesthesia and Intensive Care Department Timisoara- a Project that includes a wide list of actions
- The Medical Caravan in isolated areas in Romania, an ongoing Campaign with a great media and social impact
- The "Vaccination Marathon", an initiative with high national impact during Covid-19 pandemic

Scientific activity

I. Publications in extenso: More than 80 articles in ISI cited Journals

II. Research activity:

- Research grants accessed by national competition: 7
- Principal Investigator in International Clinical Trials: 22 trials
- 3 patents for Invention

Honorary titles and recognitions

- Knight of the National Order "For Merit", conferred by The President of Romania
- Honorary Member of the Israelian Society of Anesthesia
- Honorary Member of the Moldovian Society of Anesthesiology and Reanimatology
- Invited Professor, University of Medicine, Chisinau, Republic of Moldova
- Romanian Healthcare Awards 2022: The "Doctor of the year" Trophy
- Romanian Healthcare Awards 2022: "The Campaign of the year" Trophy, for the "Together for life" Medical Caravans Project
- Medical Elites Gala 2022: The "Best medical team" Trophy for the Department of Anesthesia and Intensive Care Timisoara
- Diploma of Excellence, World Society for Intravenous Anesthesia
- Honorary Citizen of Orastioara de Sus, the village of birth
- Honorary Citizen of Orastie City

BUNPOT SITTHINAMSUWAN

THAILAND

Professor of Neurosurgery and Consultant Neurosurgeon

Division of Neurosurgery, Department of Surgery, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand

Education and working experiences

2018-the present	Professor of Neurosurgery Division of Neurosurgery, Department of Surgery, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand
2016-2018	Associate Professor of Neurosurgery Division of Neurosurgery, Department of Surgery, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand
2011-2016	Assistant Professor of Neurosurgery Division of Neurosurgery, Department of Surgery, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand
2011-2012	Fellowship in Epilepsy and Epilepsy Surgery National Epilepsy Center, Shizuoka Institute of Epilepsy and Neurological Disorders, Shizuoka, Japan
2008-2010	Study in Stereotactic and Functional neurosurgery Tokyo Woman Medical University, Tokyo, Japan
2003-2008	Instructor Division of Neurosurgery, Department of Surgery, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand
2006-2007	Certificate of Thai board of Neurological Surgery Royal College of Neurosurgery Association of Thailand and Thai Medical Council

Area of interest

1. Stereotactic and functional neurosurgery
2. Epilepsy surgery
3. Pain surgery
4. Spasticity surgery
5. Peripheral nerve surgery
6. Restorative neurosurgery and neuromodulation
7. Psychosurgery
8. Surgery for dystonia and movement disorders

DO NGOC SON
VIETNAM

Position and Working address
Director of Center for Critical Care Medicine, Bach Mai Hospital
Chairman of Faculty of Clinical Medicine, Bach Mai Nursing School
Deputy chairman of Faculty of Emergency and Critical Care Medicine, School of Medicine and Pharmacy, Hanoi National University
Vice President of Society of Emergency, Critical Care Medicine, and Clinical Toxicology for Hanoi & the North
Secretary General of Vietnam Society of Emergency Medicine,
78 Giai Phong Road, Dong Da District, Ha Noi, Viet Nam

Education
1997: Doctor of Medicine. Ha Noi Medical University, Ha Noi, Vietnam
2001: Certified Respiratory Therapist (CRT), Pickens Technical College, Colorado, USA
2003: Resident Doctor on Emergency and Critical Care Medicine. Ha Noi Medical University, Ha Noi, Vietnam
2009: Doctor of Philosophy in Medical Science. Graduate School of Medical Sciences, Kanazawa University, Japan

Language skills
Fluency in writing, listening and reading in English.
Mother language: Vietnamese.

Grand and Scholarships:
Scholarships from Japanese government (MEXT) from 2005-2009

Translation and interpretation skills
Working as a main translator for many international conferences from 1997 to 2009.
Working as a main cabin interpreter for many international conferences in variety of specialties such as emergency medicine, critical care, toxicology, infectious diseases, pulmonology, rheumatology, neurology, oncology, anesthesiology, and biochemistry.
Working as a main translator and editor for many medical textbooks: Essentials of Mechanical Ventilation, Washington Manual of Critical Care, Stroke Essentials.

Invited speaker in international conferences & workshops:
1. EMS Asia conference 2014, Goa, India: invited speaker for PAROS study in Vietnam.
2. ICEM conference 2014, Hong Kong, China: invited speaker for PATOS and trauma care system in Vietnam.
3. ACEM conference 2015, Taipei, Taiwan: invited speaker for prehospital care session.

4. PATOS symposium 2015, Seoul, South Korea: invited speaker for PATOS data collection in Vietnam.
5. EMS Asia conference 2016, Seoul, South Korea: invited speaker for prehospital care: fluid management for shock patients in prehospital settings.
6. Synchrony Club meeting 2016, Bangkok, Thailand: invited speaker on Vietnamese healthcare and ICU.
7. Synchrony Workshop 2016, Hanoi, Vietnam: invited lecture on Proportional Assist Ventilation (PAV).
8. PATOS and EMS workshop 2017, Seoul, South Korea: invited lecture for EPIC training course.
9. Synchrony Club meeting 2017, Phuket, Thailand: invited speaker on PAV plus application and research in Vietnam.
10. ESICM conference 2018, Hong Kong, China: invited speaker on Multidrug resistance bacteria nosocomial infection case from Vietnam.
11. Synchrony Club meeting 2018, Seoul, South Korea: invited speaker on PAV plus on critically ill patients: study results on Vietnamese patients.
12. ICEM conference 2019, Seoul, South Korea:
    - Invited speaker in main conference, neuro-critical care session on Effectiveness of combined external ventricular drainage with intraventricular fibrinolysis.
    - Invited speakers PATOS and Prehospital care sessions.
13. AKI&CRRT Symposium 2019, Vicenza, Italy: invited speaker on Hemoperfusion for sepsis and acute pancreatitis: experiences from Vietnam.
14. The first Belt & Road International Conference of Infectious Diseases & 11th Conference of Chinese Physician Association for Infectious Diseases, Chinese Medical Doctor Association 2019, Hainan, China. Invited speaker on DPMAS in acute liver failure: experience from Vietnam.
15. AAEMS webinar 2020, Singapore: invited speaker on Vietnam EM & EMS response during COVID-19.
16. ACEP 2020, virtual meeting, USA: invited speaker on Emergency department restructure and organization after COVID-19
17. ACEM post graduate course 2020, Philippine: invited lecturer on Emergency department restructure and organization after COVID-19.
18. SICM webinar 2020, Singapore: invited speaker on new guideline on cardiac arrest management from AHA and ILCOR.
19. US emergency resident training course 2020, USA: invited lecturer on Emergency care system in Vietnam and how we handle COVID-19.
20. ASEAN Congress for Anesthesiologist 2022, Hanoi, Vietnam: invited speaker: Set up and Management of ICU center for COVID-19 Patients.
21. ASEM 2023, Angeles, Pampanga, Philippines: invited speaker: Post-COVID Recovery: Building Resilient Hospitals in Vietnam.

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46. Co Xuan Dao, MD, PhD, Chinh Quoc Luong, MD, PhD, Toshie Manabe, PhD, MPH, My Ha Nguyen, MD, MSc, Dung Thi Pham, MD, PhD, Tra Thanh Ton, MD, PhD, Quoc Trong Ai Hoang, MD, PhD, Tuan Anh Nguyen, MD, PhD, Anh Dat Nguyen, MD, PhD, Bryan Francis McNally, MD, MPH, Marcus Eng Hock Ong, MBBS, MPH, Son Ngoc Do, MD, PhD, The Local PAROS Investigators Group. Impact of Bystander Cardiopulmonary Resuscitation on Out of Hospital Cardiac Arrest Outcome in Vietnam. Western Journal of Emergency Medicine. doi.org/10.5811/westjem.18413.
47. Cong Tan Nguyen, Van Cuong Bui, Ngoc Son Do, Thi Huong Giang Bui, The Thach Pham, Tuan Phong Hoang, Duc Trieu Ho. Effective Management of Severe Amlodipine/Atenolol Overdose with Intravenous Calcium, Hyperinsulinemic Euglycemia Therapy, and Continuous Veno-Venous Hemodialysis: A Case Report. © Am J Case Rep, 2024; 25: e943777; DOI: 10.12659/AJCR.943777.
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Lobo, Robert Sinto, Dita Aditianingsih, Massimo Antonelli, Yaseen M. Arabi, Andrew Argent, Luciano Azevedo, Elizabeth Bennett, Arunaloke Chakrabarti, Kevin De Asis, Jan De Waele, Jigeeshu Vasishtha Divatia, Elisa Estenssoro, Laura Evans, Abul Faiz, Naomi E. Hammond, Madiha Hashmi, Margaret S. Herridge, Shevin T. Jacob, Jimba Jatsho, Yash Javeri, Karima Khalid, Lie Khie Chen, Mitchell Levy, Ganbold Lundeg, Flavia R. Machado, Yatin Mehta, Mervyn Mer, Do Ngoc Son, Gustavo A. Ospina-Tascón, Marlies Ostermann, Chairat Permpikul, Hallie C. Prescott, Konrad Reinhart, Gloria Rodriguez Vega, Halima S-Kabara, Gentle Sunder Shrestha, Wangari Waweru-Siika, Toh Leong Tan, Subhash Todi, Swagata Tripathy, Balasubramaniam Venkatesh, Jean-Louis Vincent and Sheila Nainan Myatra. Management of adult sepsis in resource-limited settings: global expert consensus statements using a Delphi method. Intensive Care Med https://doi.org/10.1007/s00134-024-07735-7.

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NICOLE VON STEINBÜCHEL
GERMANY

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, Department 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

Member of numerous scientific societies, awarded with multiple prices and national, European and international scientific grants

ANN THAIUDOM
THAILAND

Education Background:
- Bachelor of Nursing Science (First Class Honors), The Royal Thai Army Nursing College, Thailand
- Master of Nursing (Distinction), The University of Wollongong, Australia
- Program of Nursing Specialty in Critical Care Nursing (Adult and Aging), The Royal Thai Army Nursing College, Thailand
- Doctor of Philosophy (Ph.D. in Nursing), University of Missouri-St. Louis, U.S.A.

Current Position:
- Nursing Instructor, The Royal Thai Army Nursing College, Thailand

NITCHAPAT TOWATTANANON
THAILAND

Education

2014 - 2020	Doctor of Medicine Phramongkutklao College of Medicine

Work Experience

2022 - Present	Phramongkutklao Hospital Neurosurgery Resident
2021- 2022	Fort Wachiraprakan Hospital General Physician
2021	Fort Nawamintharachini hospital General Physician

2021	King Narai Hospital General Physician
2020-2021	Anandamahidol Hospital General Physician

DANUTANUT TUBNGERN
THAILAND

5th year Neurosurgery Resident, Phramongkutklao Hospital, Bangkok, Thailand.

MD:	Phramongkutklao college of medicine
2018 - 2019:	Fort Jiraprawat Hospital
2019 - 2021:	Fort Ingkayutthaboriharn hospital

KULLAPAT VEERASARN
THAILAND

Office: Neurosurgical Department, The Prasat Neurological Institute, Rajvithi Rd., Bangkok 10400, THAILAND

Summary of qualification
2013: Certificate, Hospital Administration, Faculty of Medicine, Ramathibodi Hospital, Mahidol University
1997 : Certificate, Specialist Clinical Fellow, The National Hospital for Neurology and neurosurgery, Queen Square, London, United Kongdom.
1994 : Diplomate, Thai Board of Neurological Surgery.
1989 : M.D.(2nd Class Honour), Mahidol University.

Work experience

1989-1991:	General Practice Doctor, Somdej-Prasankaraj 17th Hospital, Suphanburi, Thailand. (1990-1991 : Head of Tramatic and Emergency Medical Section)
1991-1994:	Neurological Surgery Resident, Siriraj Hospital, Bangkok, Thailand
1994-2013:	Staff in Division of Neurological surgery, The Prasat Neurological Hospital and Institute, Bangkok, Thailand
1996-1997:	Specialist Clinical Fellow, The National Hospital for Neurological and Neurosurgery, Queen Square, London, United Kingdom.
2013-2015:	Head of Neurological Division, Prasat Neurological Institute
2015-17:	Director, medical area 8 (Department of Medical services)
2017-19:	Director, medical area 2 (Department of Medical services)
2018:	Director, Borough of medical inspection (Department of Medical services)
2019-20:	Director, medical area 13 (Department of Medical services)
2017-now:	Head of Neurosurgical Division, Neurological Instutute of Thailand

Education

1983-1989:	Faculty of Medicaine, Siriraj Hospital, Bangkok Thailand.
1991-1994:	Division of Neurological Surgery, Department of Surgery, Faculty of Medicine, Siriraj Hospital, Bangkok, Thailand.
2013:	School of Hospital Administration, Faculty of Medicine, Ramathibodi Hospital, Mahidol University

Major Visiting Appointments and Training

Jun.1993:	Clinical Rotation, Division of Neurology, Faculty of Medicine, Chulalongkrn Hospital, Chulalongkorn University.
Feb.1994:	Visiting Doctor, Gamma Knife Center Heisai Memorial Hospital, Shisuoka, Japan.
Sep.1997:	Clinical Observer, The National centre for stereotactic radiosurgery, Sheffield, England

Professional memberships

- The Royal College of Neurological surgeons of Thailand
- The Royal College of Surgeon of Thailand
- The Medical Council of Thailand
- The Medical Association of Thailand

Presentation and Publication

1. Kullapat Veerasarn, Saranya Yuthagovit, Ancheon Chailorrat, Prevalence of Brain Tumor in Thailand from 2005 to 2014: Data from the National Health Security Office, JMAT, June 2016, vol 99 Suppl.3, S62 – 73
2. Kullapat Veerasarn, Vutisiri Veerasarn, Treatment of Brain Tumors in Thailand from 2005 to 2014: Data from the National Health Security Office, JMAT, June 2016: vol 99 Suppl 3: S 74 – 81
3. Kullapat Veerasarn, Stereotactic surgery pitfall, ใน: สงวนสิน รัตนเลิศ บรรณาธิการ, ศัลยศาสตร์วิวัฒน์ 45: Variety in neurosurgery common complication and pitfall in surgery, กรุงเทพฯ : กรุงเทพเวชสาร, 2554, 41- 52

JOHANNES VESTER
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Professor Johannes Vester has served as the President of the Academy for Multidisciplinary Neurotraumatology (AMN) since 2018. He has been the Head of Biometry & Clinical Research at the Institute for Data Analysis and Study Planning (IDV) in Germany since 2018 and Invited Associate Professor at the Department of Neurosciences at Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania, a position he has held since 2017.

With a background in medicine, Professor Vester researched pattern recognition in the visual brain and developed a pharmacodynamic Neuron Simulation Model at the Institute for Medical Documentation and Statistics (University of Cologne). He has conducted over 100 training courses on biometry for clinical research professionals and taught at various universities and international institutions. Throughout his career, Professor Vester has planned and evaluated around 150 randomized clinical studies worldwide.

He is a member of several international Advisory Boards and Steering Committees and has contributed as a biometric expert in regulatory authority panels, including hearings with the United States Food and Drug Administration (FDA), the European Medicines Agency (EMA), and Germany's Federal Institute for Drugs and Medical Devices (BfArM). He is also involved in workshops for the International Biometric Society (IBS) and serves as a statistical peer review member for leading medical journals.

Professor Johannes Vester holds key roles in several organizations, including serving as the Statistical Expert and Elected Member of the International Scientific Committee for the Society for the Study of Neuroprotection and Neuroplasticity (SSNN) and Co-Chair of the EAN Guideline Task Force on Neurorehabilitation.

THEERAPOL WITTHIWEJ
THAILAND

Assoc. Prof. Theerapol Witthiwej, Division of Neurosurgery. Department of Surgery, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand

Education

1995 Mahidol University, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, M.D.,

1998 Mahidol University, Graduate Diploma in Clinical Science (Surgery), Mahidol University

1997-2000 Siriraj Hospital, Mahidol University, Neurosurgery Resident

Professional affiliations

Present Royal College of Neurological Surgeons of Thailand
Committee of Royal College of Neurological Surgeons of Thailand

PARIT WONGPHAET
THAILAND

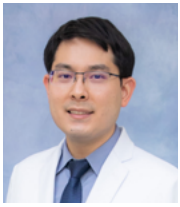
Current Positions:

- Medical Director, DBC Spine Clinic and Gym, Thailand
- Director of Corporate Development, Samrong General Hospital
- Founding Member, Thai Neurorehabilitation Society
- Managing Director, TMGI Co., Ltd.
- Board Member, Royal College of Physiatrists of Thailand
- Board Member, Samrong Ruam Jai Foundation

Dr. Parit Wongphaet is a senior rehabilitation physician with over three decades of experience in neurorehabilitation, health system development, and medical innovation. His work bridges clinical neurorehabilitation, public health policy, and technology-driven care models.

He initiated a nationally recognized fall-prevention program for older adults, which received the National Prototype Project Award from Thailand's Ministry of Social Development and Human Security and is currently under evaluation for integration into national health policy.

In clinical education, Dr. Wongphaet authored Thailand's first practical handbook on bedside cognitive assessment and rehabilitation, designed for multidisciplinary stroke and traumatic brain injury (TBI) care teams. He also leads rehabilitation robotics development through TMGI Co., Ltd., with award-winning innovations in rehabilitation robots, which have earned top national innovation awards.



VICH YINDEEDEJ
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Vich Yindeedej, MD, FRCNST.
Neurosurgeon and Instructor at Thammasat University Hospital since 1 July 2020.

Education

- Doctor of Medicine (First class honors)
  Faculty of Medicine, Chulalongkorn University 2007-2012
- Fellowship of The Royal College of Neurological Surgeons of Thailand (Neurosurgical Resident)
  Thammasat University 2015-2019
- Clinical Fellowship in Epilepsy Surgery, Functional Neurosurgery, and Glioma and Awake Surgery
  Osaka Metropolitan University 2022-2024
- Clinical Fellowship in Pediatric Neurosurgery
  Osaka City General Hospital 2022-2024

GENERAL INFORMATION

ORGANIZERS

AMN ACADEMY FOR MULTIDISCIPLINARY NEUROTRAUMATOLOGY

Academy for
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www.brain-amn.org

EFNR The European Federation of NeuroRehabilitation Societies

European Federation of
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www.efnr.org

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

Fundation of the Society for the Study of
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www.ssnn.ro

ACADEMIA DE ŞTIINŢE MEDICALE
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RoNEURO

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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.

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FINAL PROGRAM & ABSTRACT BOOK

Available online.

TIME

The program hours are adjusted to Current Local Time in Bangkok, Thailand, UTC + 7.

ACADEMY FOR
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