



# Raport de activitate:

# Laboratorul de neurobiologie și genetică medicală

**2022 - 2023**

Cercetător științific principal:  
Academician ASM., prof. univ., dr. hab. șt. med., Stanislav Groppa

## 1. Proiectul Program de Stat:

„Integrarea mecanismelor epileptogenezei cu scopul creării rețelei de diagnostic și tratament multimodal a epilepsiei”

- cifrul **20.80009.8007.40**

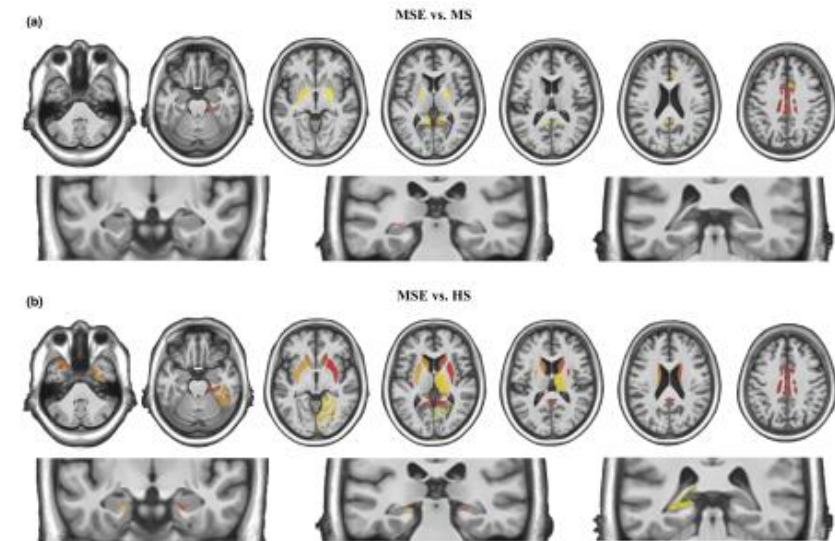
## 2. Proiectul bilateral moldo-turc:

„Extending the genetic landscape of drug-resistant epilepsy”

- cifrul **21.80013.8007.2B**

## Altered grey matter integrity and network vulnerability relate to epilepsy occurrence in patients with multiple sclerosis

Dumitru Ciolac<sup>1,2,3</sup> | Gabriel Gonzalez-Escamilla<sup>1</sup> | Yaroslav Winter<sup>4,5</sup> | Nico Melzer<sup>6</sup> | Felix Luessi<sup>1</sup> | Angela Radetz<sup>1</sup> | Vinzenz Fleischer<sup>1</sup> | Stanislav A. Groppa<sup>2,3</sup> | Michael Kirsch<sup>7</sup> | Stefan Bittner<sup>1</sup> | Frauke Zipp<sup>1</sup> | Muthuraman Muthuraman<sup>1</sup> | Sven G. Meuth<sup>6</sup> | Matthias Grothe<sup>8</sup> | Sergiu Groppa<sup>1</sup>



Numărul mare a leziunilor, alterarea integrității substanței cenușii meiotemporale și reorganizarea rețelei neuronale sunt asociate cu o tendință mai mare de apariție a epilepsiei în persoanele cu SM.

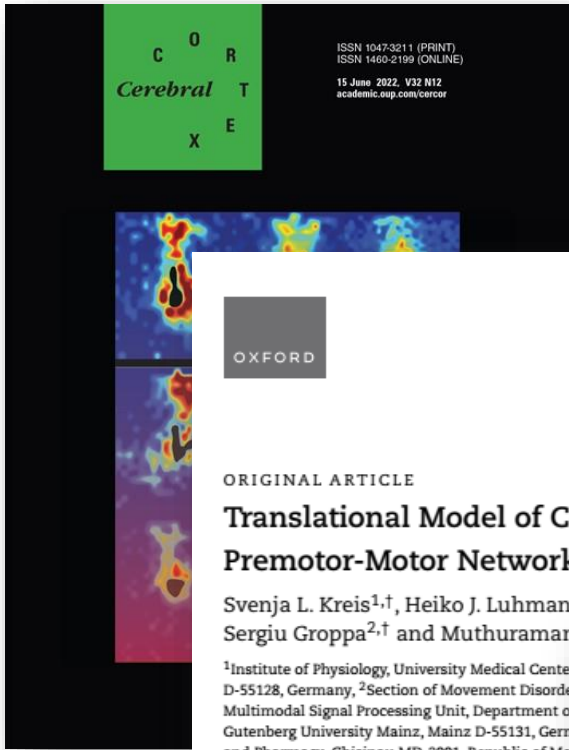


europaean journal  
of neurology

the official journal of the europaean academy of neurology







ISSN 1047-3211 (PRINT)  
ISSN 1460-2199 (ONLINE)  
15 June 2022, V32 N12  
academic.oup.com/cercor

OXFORD

Cerebral Cortex, 2022;32: 2621–2634

<https://doi.org/10.1093/cercor/bhac369>  
Advance Access Publication Date: 23 October 2021  
Original Article

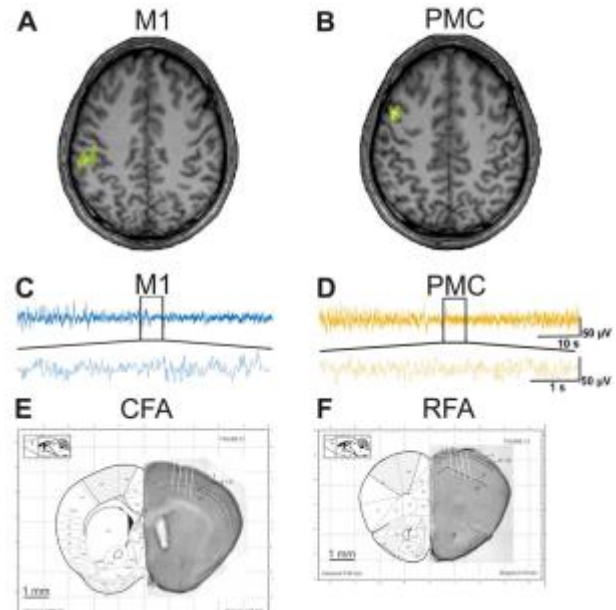
ORIGINAL ARTICLE

## Translational Model of Cortical Premotor-Motor Networks

Svenja L. Kreis<sup>1,†</sup>, Heiko J. Luhmann<sup>1,†</sup>, Dumitru Ciolac<sup>2,3</sup>, Sergiu Groppa<sup>2,†</sup> and Muthuraman

<sup>1</sup>Institute of Physiology, University Medical Center D-55128, Germany, <sup>2</sup>Section of Movement Disorder Multimodal Signal Processing Unit, Department of Gutenberg University Mainz, Mainz D-55131, Germany and <sup>3</sup>Department of Neurology, Focus Program Translational University, Langenbeckstr. 1, D-55131 Mainz, Germany. Email: mmuth

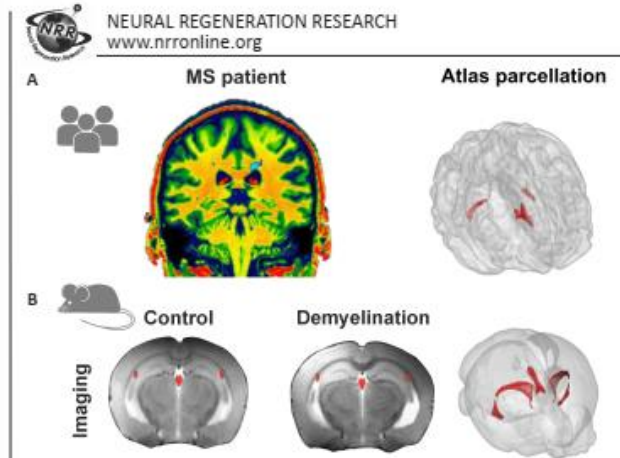
Address correspondence to Muthuraman Muthuraman, Biomedical Signal Processing, Department of Neurology, Focus Program Translational University, Langenbeckstr. 1, D-55131 Mainz, Germany. Email: mmuth  
<sup>†</sup>They have contributed equally to this work



## Perspective

## Choroid plexus imaging to track neuroinflammation – a translational model for mouse and human studies

Muthuraman Muthuraman<sup>\*,†</sup>, Mohammadsaleh Oshaghi<sup>†</sup>, Vinzenz Fleischer, Dumitru Ciolac, Ahmed Othman, Sven G. Meuth, Gabriel Gonzalez-Escamilla, Sergiu Groppa



Conectivitatea reciprocă a circuitelor RFA-CFA de șoareci prezintă un model adecvat pentru analiza controlului motor uman și a funcționării fiziologice a PMC-M1 sau a transformărilor patologice în cadrul acestei rețele.

Abordări imagistice specializate și tehnici avansate de secvențiere generează rezultate care oglindesc în mod robust activitatea și progresia sâtilor ce afectează rețele neuronale, dezvoltând astfel în continuare cercetarea translațională în acest domeniu.



# Rezultatele principale obținute



HR EXCELLENCE IN RESEARCH

Adv Exp Med Biol - Cell Biology and Translational Medicine (2022) 15: 1–27  
[https://doi.org/10.1007/5584\\_2021\\_675](https://doi.org/10.1007/5584_2021_675)  
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Published online: 5 November 2021

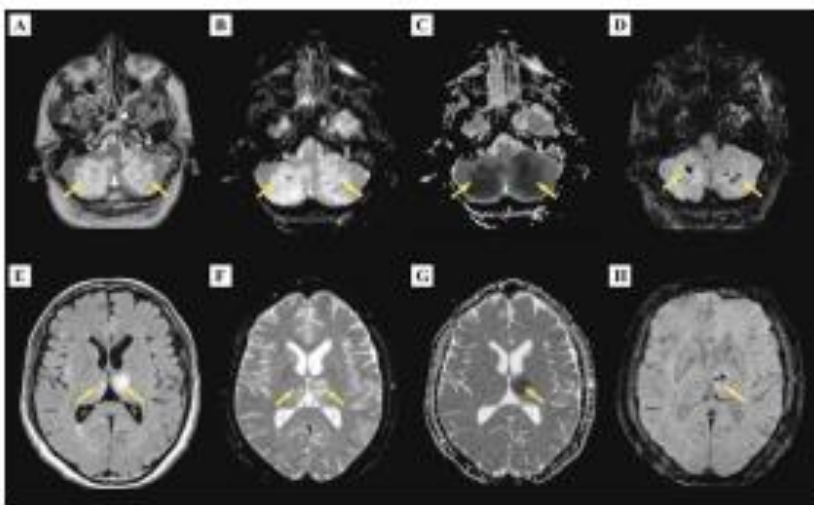
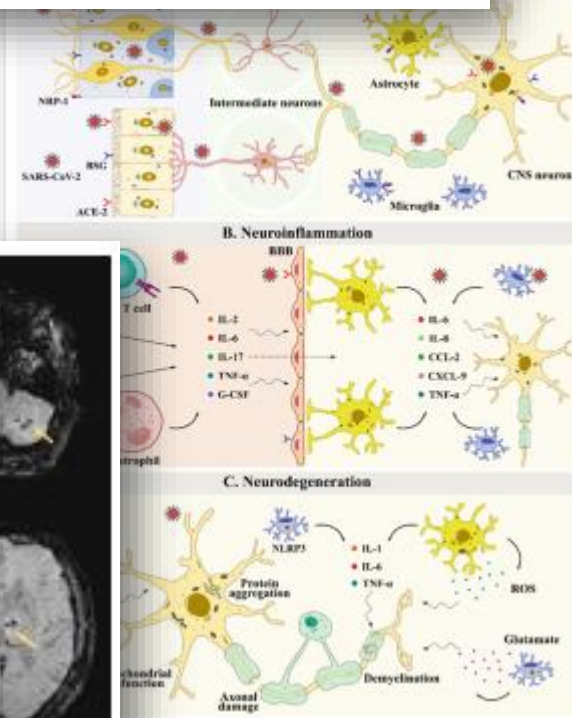
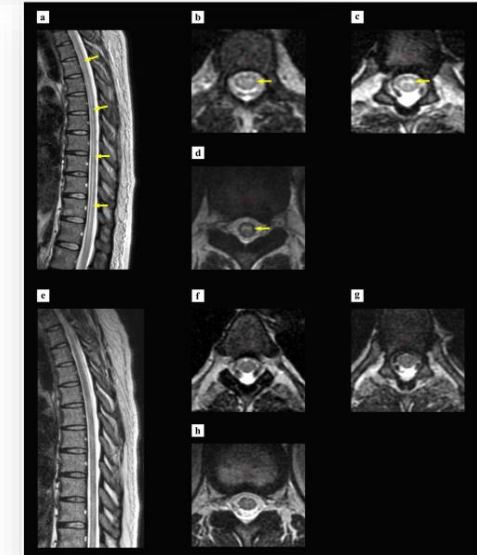
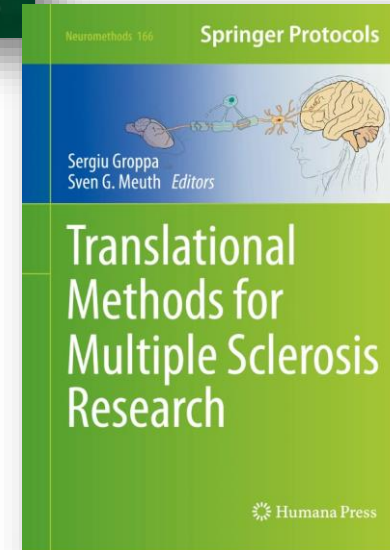
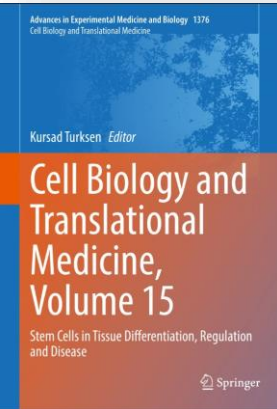
## Molecular Mechanisms of SARS-CoV-2/COVID-19 Pathogenicity on the Central Nervous System: Bridging Experimental Probes to Clinical Evidence and Therapeutic Interventions

Stanislav A. Groppa, Dumitru Ciolac, Carolina Duarte, Christopher Garcia, Daniela Gasnaș, Pavel Leahu, Daniela Efremova, Alexandru Gasnaș, Tatiana Bălănuță, Daniela Mirzac, and Alexandru Movila



## Gray Matter-Restricted Whole Spinal Cord Involvement in a Young Woman with SARS-CoV-2 Infection

Dumitru Ciolac, MD, PhD,<sup>1,2\*</sup> Igor Crivorucica, MD,<sup>1</sup> Eremei Zota, MD, PhD,<sup>1,2</sup> Diana Manea, MD,<sup>1</sup> Daniela Efremova, MD,<sup>1</sup> Ludmila Gușanu, MD,<sup>1</sup> Veaceslav Crivorucica, MD,<sup>1</sup> Mihael Ciocanu, MD, PhD,<sup>1</sup> and Stanislav A. Groppa, MD, PhD<sup>1,2</sup>



Actualizare a mecanismelor fiziopatologice ale leziunilor tisulare ale SNC induse de SARS-CoV-2, cu un accent deosebit pe căile moleculare ale neuroinvasiei, neuroinflamației și neurodegenerării.

Prezentarea spectrului emergent de tulburări clinice neuroinflamatorii și neurodegenerative asociate cu COVID-19 și abordările terapeutice care vizează căile moleculare menite să minimizeze daunele SARS-CoV-2 la compartimentele SNC.

# Rezultatele principale obținute

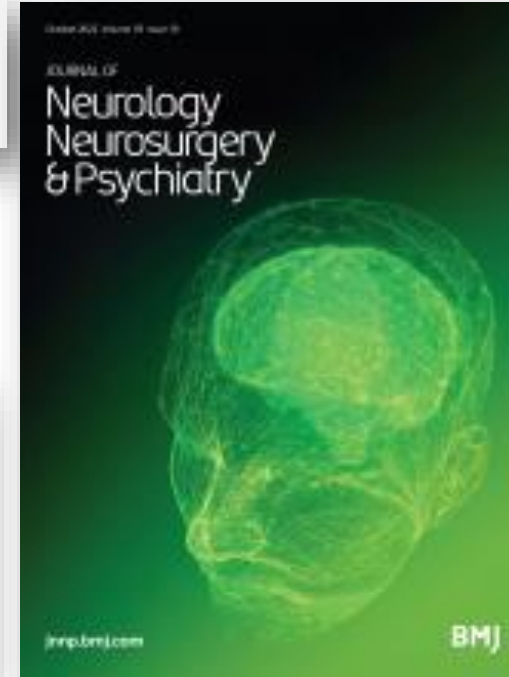


HR EXCELLENCE IN RESEARCH

October 18, 2022 RESEARCH ARTICLE

## Global Impact of the COVID-19 Pandemic on Stroke Volumes and Cerebrovascular Events: One-Year Follow-up

NGUYEN, TN.; QURESHI, MM.; KLEIN, P.; YAMAGAMI, H.; MIKULIK, R.; CZLONKOWSKA, A.; et al (incl. LEAHU, P.; GROPPA, S.A.). Global Impact of the COVID-19 Pandemic on Stroke Volumes and Cerebrovascular Events: One-Year Follow-up. *Neurology*.



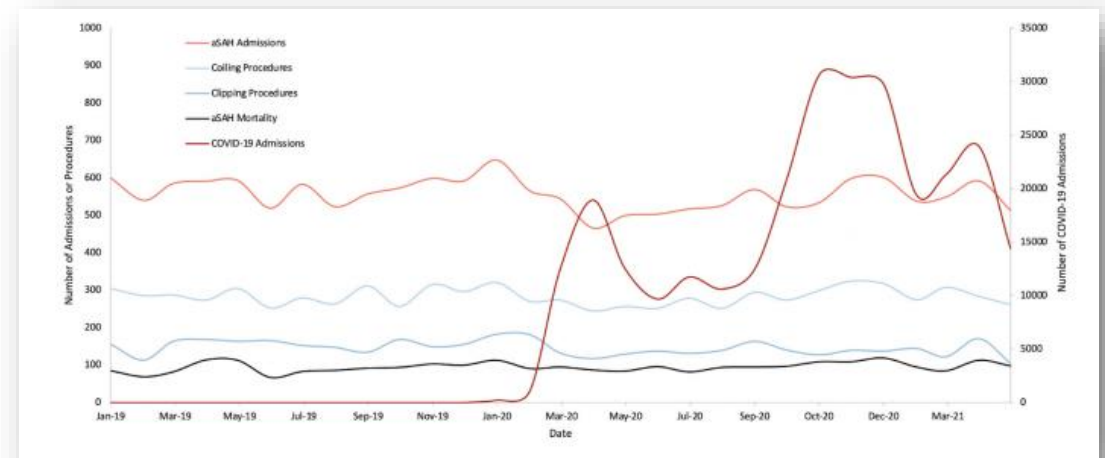
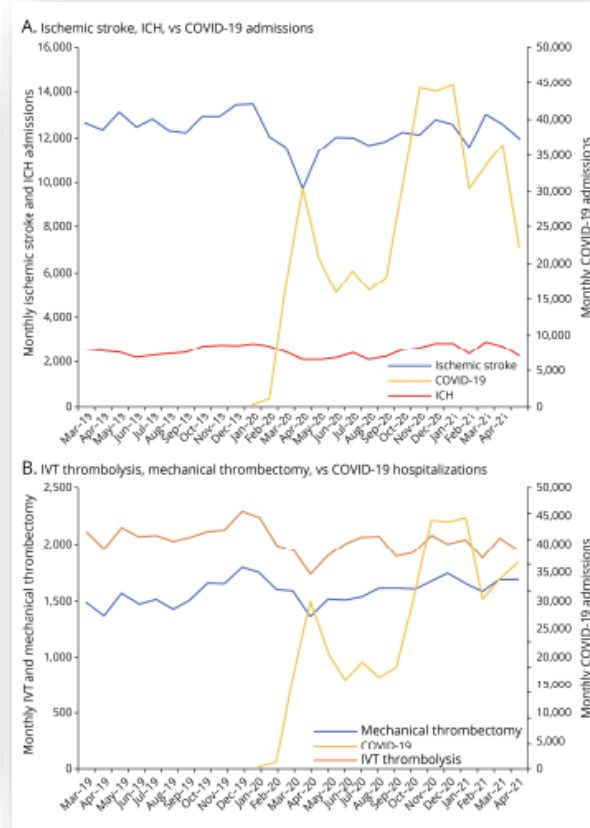
Cerebrovascular disease

Original research

Global impact of the COVID-19 pandemic on subarachnoid haemorrhage hospitalisations, aneurysm treatment and in-hospital mortality: 1-year follow-up

SVIN COVID-19 Global SAH Registry

SVIN COVID-19 GLOBAL SAH REGISTRY (incl. LEAHU, P.; GROPPA S.A.). Global impact of the COVID-19 pandemic on subarachnoid haemorrhage hospitalisations, aneurysm treatment and in-hospital mortality: 1-year follow-up. *J Neurol Neurosurg Psychiatry*.



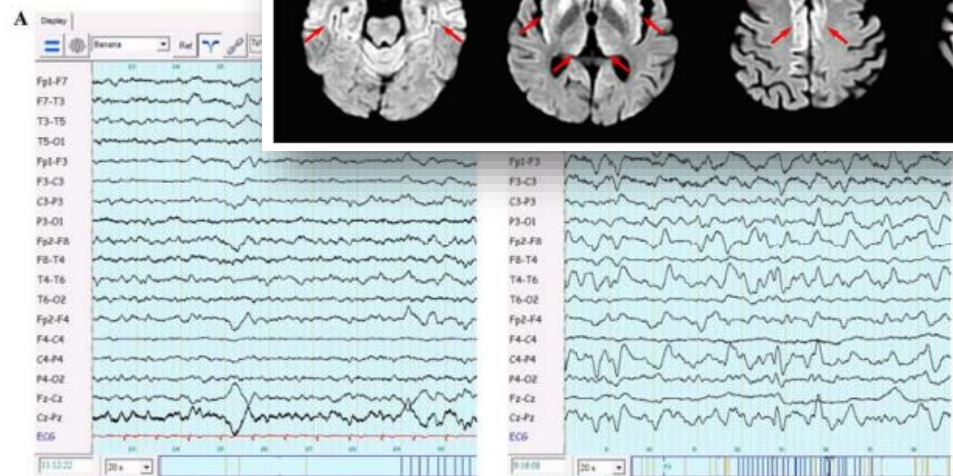
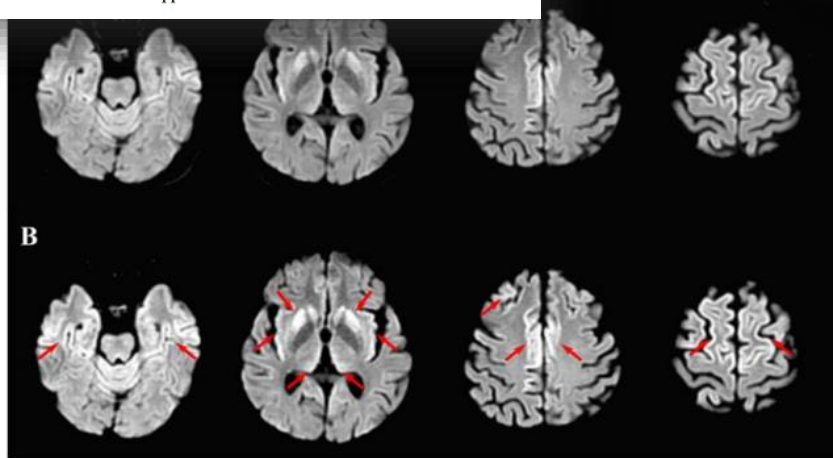


# Rezultatele principale obținute

Case Report

## Clinical and Radiological Deterioration in a Case of Creutzfeldt–Jakob Disease following SARS-CoV-2 Infection: Hints to Accelerated Age-Dependent Neurodegeneration

Dumitru Ciolac <sup>1,2</sup>, Renata Racila <sup>1,2</sup>, Carolina Duarte <sup>3</sup>, Maria Vasilieva <sup>1,2</sup>, Diana Manea <sup>1</sup>, Nadejda Gorincioi <sup>1</sup>, Alexandra Condrea <sup>1,2</sup>, Igor Crivorucica <sup>1</sup>, Eremei Zota <sup>1,2</sup>, Daniela Efreanova <sup>1,2</sup>, Veaceslav Crivorucica <sup>1</sup>, Mihail Ciocanu <sup>1</sup>, Alexandru Movila <sup>3,4,\*</sup> and Stanislav A. Groppa <sup>1,2,\*</sup>

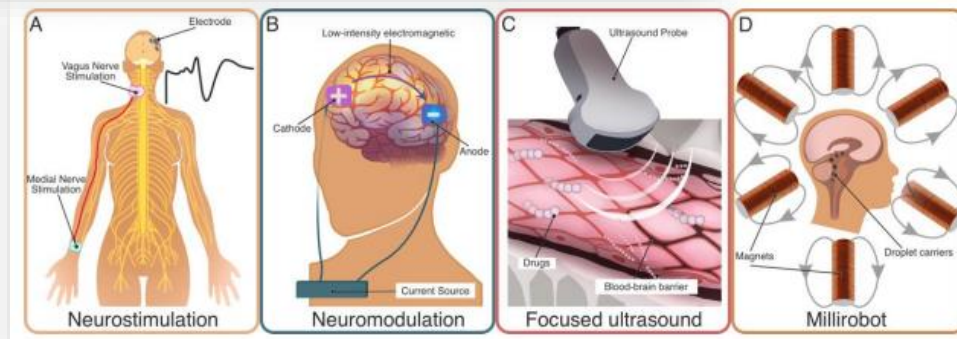


Deteriorarea clinică și radiologică în contextul infecției CJD cu apariția crizelor epileptice și a progresiei neurodegenerative în urma unei infecții cu SARS-CoV-2 și COVID-19 sever.

Commentary

## Emerging Treatments for Disorders of Consciousness in Paediatric Age

Hassna Irzan <sup>1,2</sup>, Marco Pozzi <sup>3</sup>, Nino Chikhladze <sup>4</sup>, Serghei Cebanu <sup>5</sup>, Artashes Tadevosyan <sup>6</sup>, Cornelia Calcii <sup>5</sup>, Alexander Tsiskaridze <sup>4</sup>, Andrew Melbourne <sup>1,2</sup>, Sandra Strazzer <sup>3,7</sup>, Marc Modat <sup>1</sup> and Erika Molteni <sup>1,\*</sup>



Treatments	Exclusion Criteria
Neurostimulation	<ul style="list-style-type: none"> <li>(Limiting, although not excluding) Inability to communicate pain.</li> </ul>
Neuromodulation	<ul style="list-style-type: none"> <li>Presence of epilepsy [94], unless the intervention is specifically performed to treat this complication. This applies to tES in general. However, higher associated risk of inducing seizures [95] is reported for repetitive transcranial magnetic stimulation (rTMS).</li> <li>Presence of subclinical seizures (to be ascertained with a neurophysiological examination).</li> <li>Sedative drugs, NMDA receptor antagonists, and Na<sup>+</sup> or Ca<sup>++</sup> channel blockers, which might cause (unplanned) interaction with the modulatory effect generated by the electrical currents or magnetic fields.</li> <li>Metal implants [47].</li> <li>(Limiting, although not excluding) Presence of multiple (focal) lesions, such as in the case of traumatic brain injury, which cause the targets to be multiple or not identifiable.</li> </ul>
Drug delivery	<ul style="list-style-type: none"> <li>Allergy to chemical vectors [88].</li> <li>Certain inaccessible location of the anatomical structure to be targeted by drug delivery.</li> </ul>

Avansarea generală în domeniul tulburărilor de conștiință pediatrică depinde în cele din urmă de conștientizarea globală a cererii tot mai mari de îngrijire post-acute, de pregătire profesională specifică în tratamentul tulburării de conștiință pediatrică și de generarea concentrată de fonduri pentru tulburarea de conștiință pediatrică.



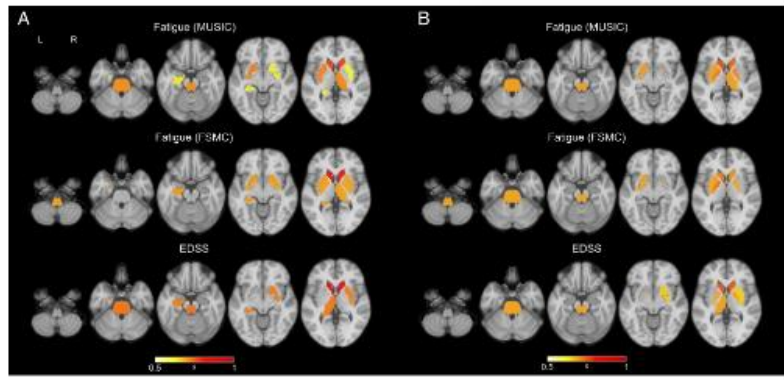
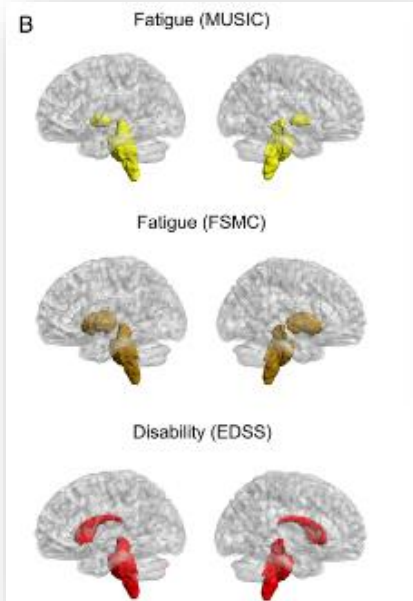
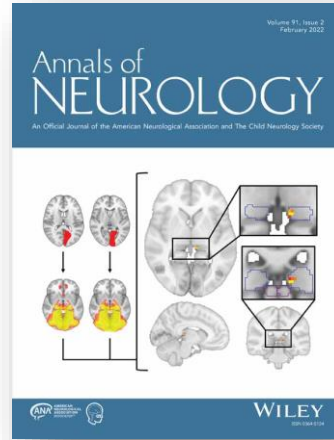
# Rezultatele principale obținute



Research Article | Open Access | CC BY-NC-ND

## Subcortical Volumes as Early Predictors of Fatigue in Multiple Sclerosis

Vinzenz Fleischer MD, Dumitru Ciolac MD, Gabriel Gonzalez-Escamilla PhD, Matthias Grothe MD, Sebastian Strauss MD, Lara S. Molina Galindo MD, Angela Radetz PhD ... See all authors

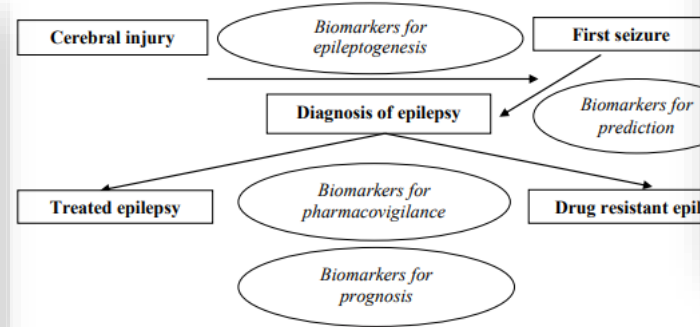


Evidențiat asocieri predictive ale volumelor specifice de materie cenușie subcorticală cu fatigabilitatea într-o cohortă de SM precoce și inițial netratată. Colocalizarea acestor structuri subcorticale cu hub-uri de rețea sugerează un rol timpuriu al acestor regiuni ale creierului în ceea ce privește evoluția fatigabilității.

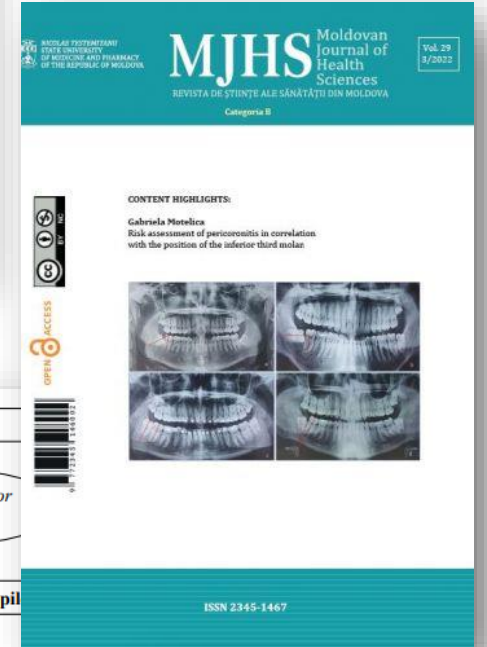
## Molecular and cellular biomarkers in status epilepticus and epilepsy

Cornelia Calcii<sup>1,3\*</sup>, Svetlana Hadjiu<sup>1,3</sup>, Iulia Calistru<sup>1</sup>, Andrei Calistru<sup>1</sup>, Ludmila Feghiu<sup>1,4</sup>, Olga Constantin<sup>1</sup>, Stanislav Groppa<sup>2,4</sup>

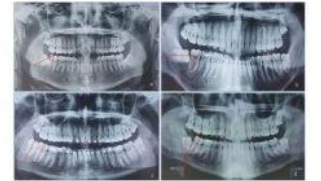
<sup>1</sup>Department of Pediatrics, Nicolae Testemițanu State University of Medicine and Pharmacy, Chișinău, Republic of Moldova  
<sup>2</sup>Department of Neurology Nr. 2, Nicolae Testemițanu State University of Medicine and Pharmacy, Chișinău, Republic of Moldova  
<sup>3</sup>Institute of Mother and Child, Chișinău, Republic of Moldova  
<sup>4</sup>Institute of emergency medicine. The National Center of Epileptology, Chișinău, Republic of Moldova.



HR EXCELLENCE IN RESEARCH



CONTENT HIGHLIGHTS:  
Gabriela Moreșica  
Risk assessment of pericoronitis in correlation with the position of the inferior third molar



Neurotherapeutics (2021) 18:1665–1677  
https://doi.org/10.1007/s12017-021-00893-y

ORIGINAL ARTICLE

### Network Substrates of Centromedian Nucleus Deep Brain Stimulation in Generalized Pharmacoresistant Epilepsy

Cristina V. Torres Diaz<sup>1</sup>, Gabriel González Escamilla<sup>2,3</sup>, Dumitru Ciolac<sup>1,4\*</sup>, Marta Nevas Garcia<sup>1</sup>, Paloma Paludo Rivas<sup>1</sup>, Rafael G. Solá<sup>1</sup>, Antonio Barba<sup>5</sup>, Jesús Pastor<sup>6</sup>, Lorena Vega-Zalazny<sup>7</sup>, Sergio Groppa<sup>8</sup>

Accepted: 1 April 2021 / Published online: 20 April 2021  
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**Abstract**  
Deep brain stimulation (DBS), specifically thalamic DBS, has achieved promising results to reduce seizure severity and frequency in pharmacoresistant epilepsy, thereby establishing its role in clinical use. The mechanisms of action are, however, still unknown. We evaluated the brain networks directly modulated by centromedian (CM) nucleus DBS and responsible for clinical outcomes in a cohort of patients surgically diagnosed with generalized pharmacoresistant epilepsy. Prospective imaging and long-term (2–11 years) clinical data from non-generalized pharmacoresistant epilepsy patients (mean age at surgery = 30.8 ± 3.9 years, 4 female) were evaluated. Volume of tissue activated (VTA) was included as covariate to reconstruct the engaged network in thalamic DBS from diffusion and functional imaging data. CM-DBS clinical outcome improvement (> 50%) appeared in 80% of patients and was tightly related to VTA interconnected with a circular system network encompassing centromedian and supplementary motor cortex, together with cerebellar/brainstem. Despite methodological differences, both structural and functional connectomes revealed the same targeted network. Our results demonstrate that CM-DBS network in generalized pharmacoresistant epilepsy is highly dependent on the individual connectivity profile, involving the cerebellar-thalamic cortical circuit. The proposed framework could be implemented in future studies to refine neurostimulation parameters for individualized neurostimulation.

**Keywords** Deep brain stimulation · Brain networks · Centromedian nucleus · Neurostimulation · Generalized epilepsy

Cristina V. Torres Diaz and Gabriel González Escamilla contributed equally to this work.

\* Gabriel González Escamilla

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<sup>2</sup> Neurology Division and Neurostimulation, Department of Neurology, Prince of Asturias Hospital, Oviedo (PA), Asturias, Spain

<sup>3</sup> Institute of Neurology, Madrid, Spain

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<sup>14</sup> Institute of Neurology, Madrid, Spain

### Introduction

Epilepsy is a very common chronic neurological disorder characterized by recurrent seizures, presenting a high prevalence and leading to an increased psychosocial burden for patients, families, caregivers, and health systems [1]. Approximately 30% of epilepsy patients will have adequate seizure control with pharmacotherapy alone [1] and long-term (decades) of successful control have been established, suggesting that epilepsy control can be achieved through long-term treatment, and a massive decline in quality of life.

Recent work has brought first important hints for the mechanisms underlying generalized pharmacoresistant epilepsy, showing widespread structural integrity within the frontal, sensorimotor, and parietal cortices, as well as the anterior cingulate [2, 3], which correlates in patients with poorly controlled seizures [2]. EEG-fMRI studies have shown that during generalized seizures, a characteristic pattern of subcortical (medial dorsal thalamus) and anterior

# Rezultatele principale obținute

## Drug-resistant Temporal Lobe Epilepsy due to Hippocampal Sclerosis. Clinical Case.

Vasilieva M. <sup>1</sup>, Gorincioi N. <sup>1</sup>, Vataman A. <sup>1</sup>, Chiosa V. <sup>1</sup>, Groppa St. <sup>1</sup>



HR EXCELLENCE IN RESEARCH

### Background:

Drug-resistant epilepsy (DRE) embraces one-third of all patients with epilepsy [1]. The most frequent cause of drug resistant Temporal Lobe Epilepsy in adults is Hippocampal Sclerosis (HS) [3]. Reduced quality of life, injuries, high rates of poly-drug toxicity and high risks of premature death were reported in patients with DRE [1,2,3].

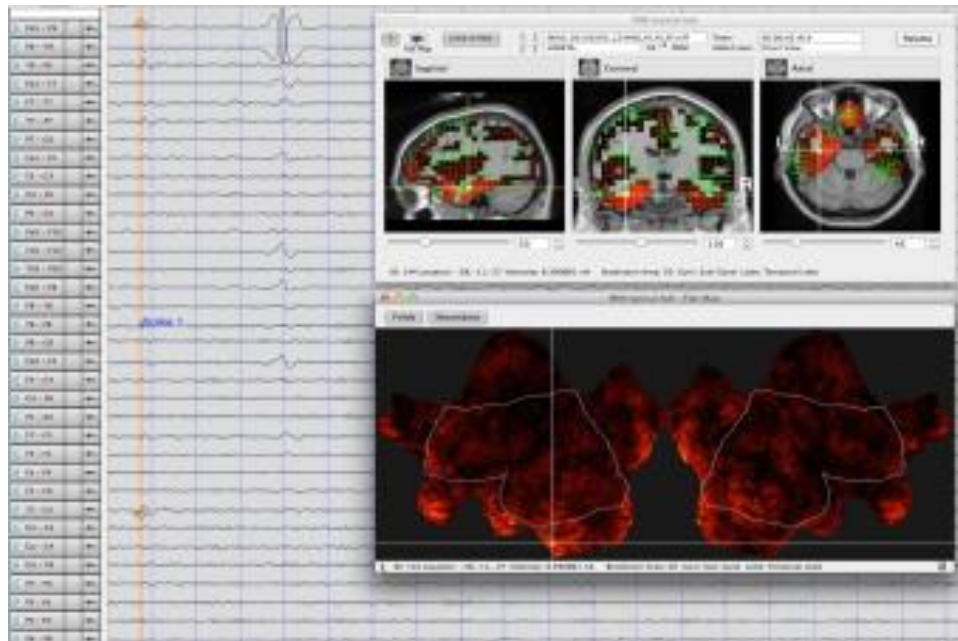
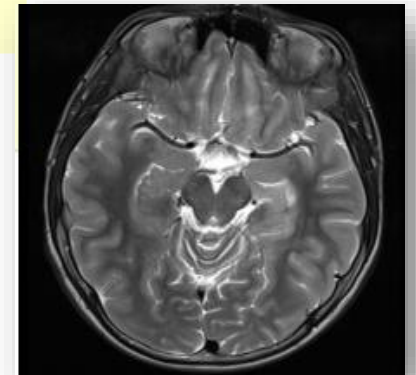
### Medical history

- ① First seizure at the age of **6 years**, it was **febrile seizure** and after that, he endured traumatic brain injury.
- ② The treatment with **Valproic Acid 300-300 mg**, was started. After two months it was discontinued, and Carbamazepine treatment was initiated. **For five years on Carbamazepine treatment, the patient was in clinical remission.**
- ③ He developed **Status Epilepticus at 11 years (2012)**, after traumatic brain injury.

EEG: Left Temporo-frontal epileptiform discharges. The high-density EEG showed implication of Brodman area 20

### Case

**21 years-old man**, with seizures that start with epigastric aura, fear and, oral and manual automatisms, with alteration of state of consciousness, with periodically progression to bilateral tonic-clonic seizures, postictal confusion and amnesia.



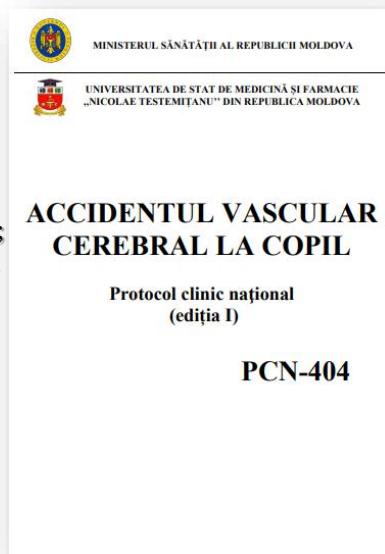
In 2015 Levetiracetam treatment was added. From **March till September 2021**, he received **Carbamazepine 600mg-600mg** and **Levetiracetam 1500mg-1500mg**. In **September 2021** was increased dosage of **Carbamazepine 750mg-600mg**.

**Conclusion:** Total freedom from seizures in DRE may not be feasible, and in such patients surgical treatment should be considered. The treatment should be individualized for every case.

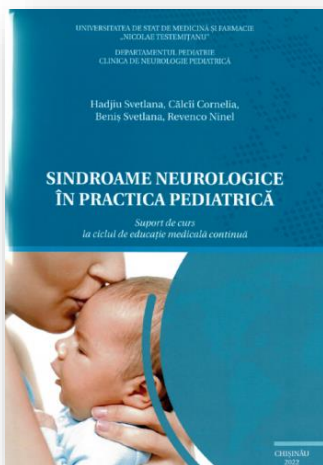
Lipsa totală de crize epileptice în Epilepsia farmacorezistentă poate să nu fie fezabilă și la astfel de pacienți trebuie luat în considerare tratamentul chirurgical. Tratamentul trebuie să fie individualizat pentru fiecare caz.



- Protocol clinic național



REVENCO, N.; HADJIU, S.;  
CRIVCEANSCHI, L.; CALCII, C.;  
SPRINCEAN, M.; LUPUȘOR, N.  
Accidentul vascular cerebral la  
copii. Protocol clinic național  
(ediția I). Chișinău, 2022

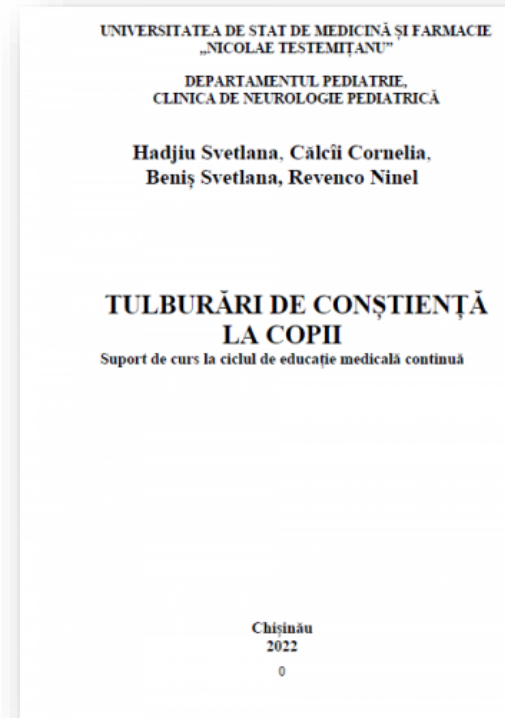


HADJIU, S., CĂLCÎI, C.,  
BENIȘ, S., REVENCO, N.  
Sindroame neurologice în  
practica pediatrică: Suport  
de curs la ciclul de Educație  
medicală continuă

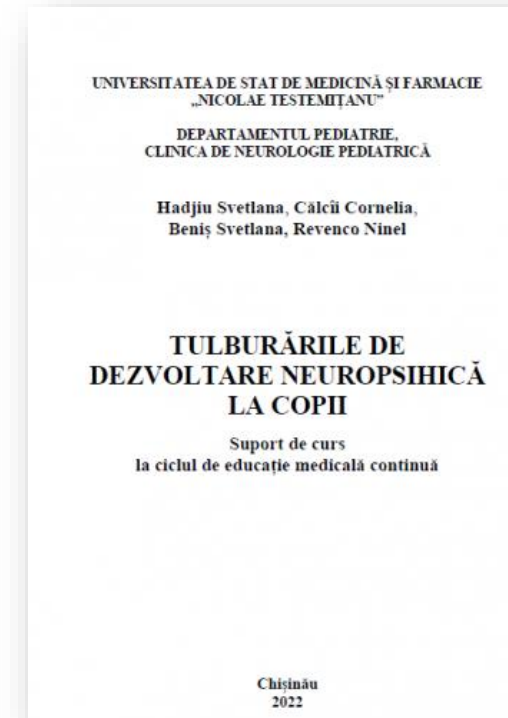


HADJIU, S., CĂLCÎI, C., BENIȘ,  
S., REVENCO, N. Tulburările de  
spectru autist și sindromul autistic  
la copii: suport de curs la ciclul de  
educație medicală continuă

- Suport de curs



HADJIU, S.; CĂLCÎI, C.; BENIȘ,  
S.; REVENCO, N.; Tulburări de  
conștiență la copii. Suport de curs  
la ciclul de educație medicală  
continuă. Chișinău. Centrul  
Editorial-Poligrafic *Medicina* 2022,



HADJIU, S.; CĂLCÎI, C.; BENIȘ, S.;  
REVENCO, N. Sindroame neurologice  
în practica pediatrică. Suport de curs la  
ciclul de educație medicală continuă.  
Chișinău. Centrul Editorial-Poligrafic  
*Medicina* 2022, 96 p





**INSTITUTUL MAMEI ȘI COPILULUI**

## Domenii de colaborare:

- Predicția riscului dezvoltării epilepsiei farmacorezistente
- Elaborarea protocolului de evaluare a a pacienților cu epilepsie farmacorezistentă
- Elaborarea registrului pacienților cu epilepsie farmacorezistentă
- Polimorfismul clinic și factorii etiologici al epilepsiei farmacorezistente
- Determinarea variațiilor genice în unele forme de epilepsie farmacorezistentă

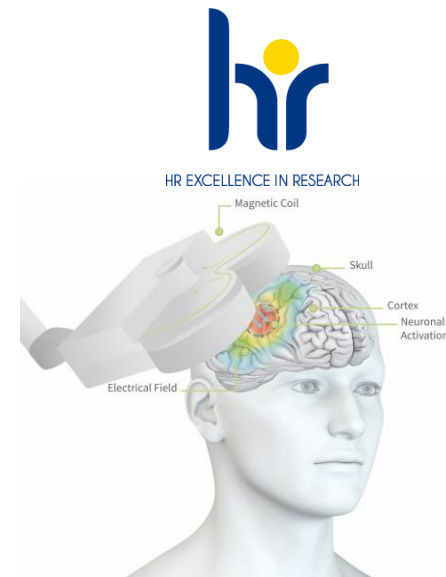
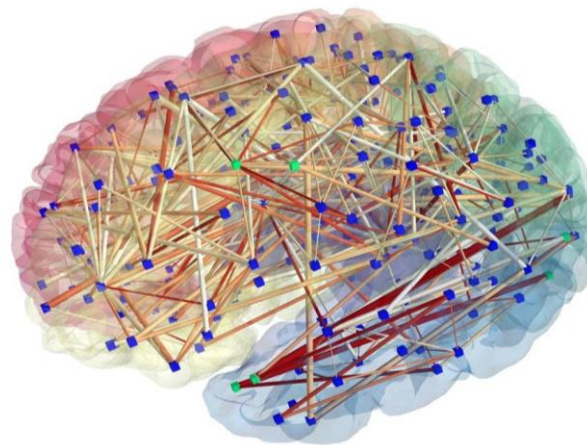
## Colaborări științifice internaționale



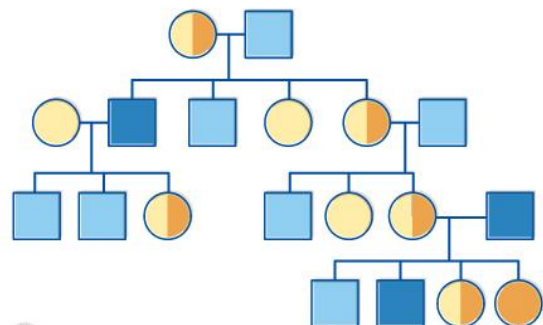
**Prof. Sergiu GROPPA**



JOHANNES GUTENBERG  
UNIVERSITÄT MAINZ



**NEUROMODULAREA & REMODELAREA CEREBRALĂ PRIN  
STIMULARE MAGNETICĂ TRANSCRANIANĂ (TMS)  
ÎN EPILEPSIE**



**GENETICA EPILEPSIEI**



**Prof. Henry HOULDEN**



**Queen Square  
Institute of  
Neurology**

## Proiectul comun de prevenire al AVC în Republica Moldova



Profesor  
Eugen Trinkă



Profesor  
Wolfgang Aulitzky



Profesor  
Stanislav Groppa



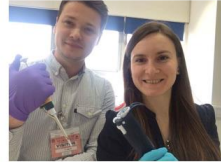
## Proiectul comun de cercetare a genicii in Epilepsie si AVC



Mares Britania, HENRY HOULDEN,  
National Hospital Neurology and Neurosurgery, UCLH



Profesor  
Stanislav Groppa



SUA, MARK MALKHOFF  
Vice-Chairman,  
Professor & Vice-  
Chairman,  
Director,  
Neurology  
Residency  
Program

Marea Britanie,  
HENRY HOULDEN,  
National  
Hospital Neurology  
and  
Neurosurgery,  
UCLH

Colaborări  
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(Johannes  
Gutenberg-  
Universität  
Mainz, Mainz)

Austria,  
EUGEN TRINKA  
Paracelsus  
Medical  
University

## Proiectul comun didactic de sincronizare a studiilor prin rezidențiat SUA-Republica Moldova



Profesorul MARK MALKHOFF,  
prof. universitar,  
Șeful Departamentului Neurologie,  
Universitatea de Științe Medicale din Tennessee, Memphis



Profesor  
Stanislav Groppa



## Proiectul comun de cercetare a conectivității neuronale în Epilepsie si AVC



Germania SERGIU GROPPA  
(Johannes Gutenberg-Universität Mainz, Mainz)



Profesor  
Stanislav Groppa





# Participări la manifestări științifice internaționale



HR EXCELLENCE IN RESEARCH

## 9th Eilat International Educational Course: Pharmacological Treatment of Epilepsy

Mishkenot Sha'ananim, Yemin Moshe in Jerusalem, Israel

3 - 8 April 2022



### DRUG-RESISTANT TEMPORAL LOBE EPILEPSY DUE TO HIPPOCAMPAL SCLEROSIS. CLINICAL CASE.

Maria Vasilieva<sup>1</sup>, Nadedja Gorincioi<sup>2</sup>, Anatolie Vataman<sup>3</sup>, Vitalie Chiosa<sup>3</sup>, Stanislav Groppa<sup>1</sup>  
<sup>1</sup>Department of Neurology no 2, Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Moldova, <sup>2</sup>Department of Neurology, Emergency Institute, Chisinau, Moldova, Republic of, <sup>3</sup>Department of Neurology, Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**EPV-471**  
**Electroencephalographic challenges in patients with epilepsy**  
D. Afanas<sup>1</sup>, D. Dragan<sup>1</sup>, V. Chiosa<sup>1</sup>, C. Munteanu<sup>1</sup>, L. Iuhtimovschi<sup>2</sup>, S. Groppa<sup>1</sup>  
<sup>1</sup>Laboratory of neurobiology and medical genetics, Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Republic of Moldova, <sup>2</sup>National Epileptology Center, Institute of Emergency Medicine, Chisinau, Republic of Moldova

**EPV-477**  
**Drug-resistant cavernoma - related epilepsy**  
D. Dragan<sup>1</sup>, L. Iuhtimovschi<sup>2</sup>  
<sup>1</sup>State University of Medicine and Pharmacy Nicolae Testemitanu, <sup>2</sup>National Epilepsy Center, Republic of Moldova

**EPV-421**  
**Hypokalemia- stroke mimic. Case report**  
M. Vasilieva<sup>1</sup>, D. Istratii<sup>2</sup>, E. Zota<sup>1</sup>, I. Crivoricuca<sup>2</sup>, I. Vasilieva<sup>3</sup>, S. Groppa<sup>1</sup>  
<sup>1</sup>Department of Neurology No.2, "Nicolae Testemitanu" SUMPH, Chisinau, Republic of Moldova, <sup>2</sup>Emergency Institute of Medicine, Chisinau, Republic of Moldova, <sup>3</sup>Department of Cardiology, "Nicolae Testemitanu" SUMPH, Chisinau, Republic of Moldova



**14th European Epilepsy Congress**  
 9-13 July 2022  
 Geneva, Switzerland



**EPO-051**  
**Evolutionary neurodevelopment in children with epileptic and developmental encephalopathies**  
L. Feghiiu<sup>1</sup>, S. Hadjiu<sup>1</sup>, M. Sprincean<sup>1</sup>, L. Cudmila<sup>2</sup>, G. Corina<sup>1</sup>, L. Nadejda<sup>1</sup>, C. Cornelia<sup>1</sup>, R. Ninel<sup>1</sup>, G. Stanislav<sup>1</sup>  
<sup>1</sup>State University of Medicine and Pharmacy „Nicolae Testemitanu”, Chisinau, Republic of Moldova, <sup>2</sup>PMSI Mother and Child Institute, Chisinau, Republic of Moldova, <sup>3</sup>PMSI Institute of emergency medicine, National Center of Epileptology, Chisinau, Republic of Moldova

**EPV-382**  
**Painting the ceiling and vertebral artery hypoplasia as risk factors for vertebral artery dissection: a case report**  
D. Efreanova<sup>1</sup>, E. Zota<sup>1</sup>, D. Manea<sup>2</sup>, I. Crivoricuca<sup>2</sup>, D. Ciolac<sup>1</sup>, O. Bucatanu<sup>2</sup>, I. Smetanca<sup>2</sup>, S. Groppa<sup>1</sup>  
<sup>1</sup>Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Republic of Moldova, <sup>2</sup>Institute of Emergency Medicine, Chisinau, Republic of Moldova

**EPO-256**  
**Impact of COVID-19 pandemic on stroke care in the Republic of Moldova**  
 S. Groppa, P. Leahu, A. Gasnas  
 Department of Neurology, Nicolae Testemitanu State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

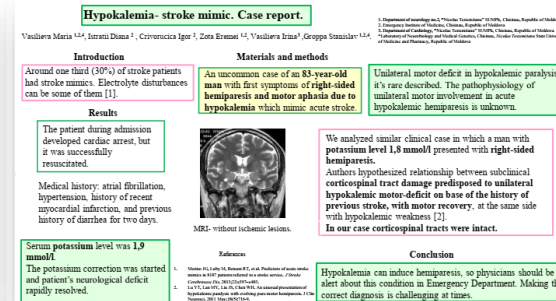
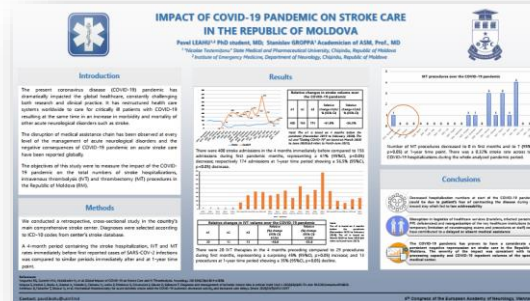
**EPV-280**  
**Identification of genes involved in folic acid synthesis in mothers of children with congenital cerebral malformations**  
 O. Tihai, M. Sprincean, S. Hadjiu, N. Revenco  
 University of Medicine and Pharmacy Nicolae Testemitanu Department of Paediatric Neurology, Chisinau Moldova

### 360 | Increased vulnerability of brain networks in focal epilepsy is driven by local topology reorganization

D. Ciolac<sup>1,2</sup>; S.A. Groppa<sup>2</sup>; V. Chiosa<sup>2</sup>; Y. Winter<sup>1</sup>; A. Vataman<sup>2</sup>; M. Muthuraman<sup>1</sup>; G. Gonzalez-Escamilla<sup>1</sup>; S. Groppa<sup>1</sup>  
<sup>1</sup>University Medical Center of the Johannes Gutenberg University Mainz, Mainz, Germany; <sup>2</sup>State University of Medicine and Pharmacy "Nicolae Testemitanu", Chisinau, Moldova

### 108 | De Novo seizures in convulsive status epilepticus in children and in those with pre-existing seizures: clinical evolution

C. Calciu<sup>1,2</sup>; S. Hadjiu<sup>1,2</sup>; M. Sprincean<sup>2,1</sup>; I. Calistru<sup>1,2</sup>; A. Calistru<sup>1,2</sup>; O. Constantin<sup>2</sup>; L. Feghiiu<sup>1,2</sup>; N. Lupusor<sup>1</sup>; L. Cuznet<sup>1</sup>; C. Griu<sup>1</sup>; N. Revenco<sup>1,2</sup>; S. Groppa<sup>3,1</sup>  
<sup>1</sup>Medical State University "Nicolae Testemitanu", Chisinau, Moldova; <sup>2</sup>Hospital of Mother and Child Healthcare, Chisinau, Moldova; <sup>3</sup>National Epileptology Center, Chisinau, Moldova





# Participări la manifestări științifice internaționale



HR EXCELLENCE IN RESEARCH



## CONGRESUL INTERNAȚIONAL PREGĂTIM VIITORUL PROMOVÂND EXCELENȚA



Dragon Pițarușu,  
Sweet Child in Time, detaliu instalație, obiecte asamblate

### E. REPERE ÎN MEDICINĂ

### Transcranial magnetic stimulation in migraine prophylaxis. Results of an experimental, double-blind, randomized controlled study.

Acad. ASM, univ. prof. PhD, MD Stanislav Groppa

Univ. Medicine and Pharmacy "Nicolae Testemițanu", Institute of Emergency Medicine, Chisinau, Republic of Moldova

29-30 septembrie 2022

- ora 11<sup>20</sup>
4. EEG de densitate înaltă dezvăluie originea în lobul frontal a descărcărilor generalizate interictale la pacienți cu crize mioclonice CS drd. *Tatiana Ananiciu<sup>1</sup>, CS drd. Dumitru Ciolac, Asist. univ. dr. Vitalie Chioară<sup>2</sup>, Acad. Stanislav Groppa<sup>3</sup>*
- <sup>1</sup>Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu”, Republica Moldova
- ora 11<sup>20</sup>
5. Transcranial magnetic stimulation in migraine prophylaxis. Results of an experimental, double-blind, randomized controlled study
- Asist. univ. drd. Pavel Leahu<sup>1</sup>, Acad. Stanislav Groppa<sup>2</sup>
- <sup>1</sup>Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu”, Republica Moldova
- ora 11<sup>30</sup>
6. Cauze atipice de accident vascular cerebral - mimici și cameloani
- Dr. Alexandru Gasnaș<sup>1</sup>
- <sup>1</sup>Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu”, Republica Moldova

- ora 11<sup>45</sup>
7. Profesorul Alexandru Moruzi - fondatorul neurochirurgiei ieșene
- drd. Horia Berceamir<sup>1</sup>, Acad. Stanislav Groppa<sup>2</sup>
- <sup>1</sup>Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu”, Republica Moldova
- ora 11<sup>55</sup>
8. Confruntarea cu depresia după accident vascular cerebral: provocare, redefinire, actualitate
- Dr. Tatiana Bălanuș<sup>1</sup>, Acad. Stanislav Groppa<sup>2</sup>
- <sup>1</sup>Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu”, Republica Moldova
- ora 12<sup>20</sup>
9. Tulburare de stres post-traumatic în epilepsie. Caz clinic
- CS drd. Elena Condratiuc<sup>1,2</sup>
- <sup>1</sup>IMSP Institutul de Medicină Urgentă Central Național de Epileptologie, Chișinău, Republica Moldova
- <sup>2</sup>Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu”, Republica Moldova

### Collaterals 2022

Today at 7:20 PM · 40 min · Room 1  
**Tajikistan, Kazakhstan, Uzbekistan & Kyrgyzstan**  
Aida Kondybayeva, Inna Lutsenko, Diloro Zuurbekova, Rasulova Khurshidakhon Abduboriev

Today at 8:00 PM · 40 min · Room 1  
**Georgia, Azerbaijan & Pakistan**  
Zurab Nadareishvili, Umair Rashid, Alexander Tsiskaridze, Nabil Seyidov, Mohammed Wasa

Today at 8:40 PM · 40 min · Room 1  
**India, Nepal & Bhutan**  
P.N Sylaja, Tashi Tenzin, Lekhung Thapa, Dileep Yavagal, Yangchen Yangchen, Aneesh Singh

Today at 9:20 PM · 40 min · Room 1  
**Ukraine & Moldova**  
Dmytro Lebedynets, Yuriy Flomin, Stanislav Groppa

### 9th International Symposium on Collaterals to the Brain 2022

November 3 - 6, 2022  
Los Angeles, CA USA

### DISTINCȚIE DE EXCELENȚĂ

Se acordă d-lui Asist. univ. drd. Pavel Leahu în semn de prețuire pentru activitatea susținută în slujba propășirii învățământului superior medical, a culturii și științei românești.

CONGRESUL INTERNAȚIONAL „PREGĂTIM VIITORUL PROMOVÂND EXCELENȚA”  
Ediția a XXXII-a  
28 februarie - 2 martie 2022

Președinte, Prof. univ. dr. V. Barbu  
Președinte Senat, Prof. univ. dr. C. STADOLEANU  
Conf. univ. dr. Ștefan

### CERTIFICATE OF ATTENDANCE

presented to **Pavel LEAHU**

for the participation at ICGEB & The Future of Science "Biotechnology for economic and societal development in the Southern-Eastern Europe", 29-30 September, 2022, Chișinău, Republic of Moldova

ICGEB International Centre for Genetic Engineering and Biotechnology  
WORLD FUTURE OF SCIENCE UNIVERSITY OF MEDICINE AND PHARMACY OF THE REPUBLIC OF MOLDOVA

### Med spera

## ABSTRACT BOOK

# 9<sup>th</sup>

International Medical Congress for Students and Young Doctors

Chisinau, Republic of Moldova

POWERED BY BP

### Ukraine & Moldova

Dmytro Lebedynets  
Feofaniya Clinical Hospital, Kyiv, Ukraine, Head of Stroke Center

Yuriy Flomin  
Head, Stroke Center, Medical Center 'Universal Clinic 'Oberig'

Stanislav Groppa

### 9. CATAMENIAL STATUS EPILEPTICUS, A RARE CONDITION OR AN UNDERDIAGNOSED EVENT.

Author: Vasileva Maria

Co-author: Oglinda-Catarina Gabriela, Groppa Stanislav

Scientific adviser: Stanislav Groppa, PhD, Professor, Academician of the Academy of Sciences of the Republic of Moldova, Neurology Department No. 2, Nicolae Testemițanu State University of Medicine and Pharmacy of the Republic of Moldova.

**Introduction.** Catamenial epilepsy (CE) is a phenomenon in which seizures are related to hormonal changes due to the menstrual cycle. Estrogen has proconvulsant assets, whilst Progesterone has anticonvulsant proof. Three varieties of catamenial seizures have been defined: 1) C1- the most typical pattern (perimenstrual), as linked with withdrawal from high progesterone levels; 2) C2- periovulatory, is linked with follicular phase of the menstrual cycle, with high estrogen levels and 3) C3- inadequate luteal-phase, in which progesterone levels are under normal limits, seen in healthy controls. The incidence of catamenial status epilepticus (CSE) is unknown and is seldom mentioned.

**Aim of study.** To review scientific information about CSE for practical and scientific purposes.

**Methods and materials.** This paper provides a review of clinical cases using PubMed and Hindawi databases over ten years period. Key terms used in the are searching for: CSE, CE.

**Results.** During the ten years, only four clinical cases were reported in which CSE due to CE was diagnosed. Two of them were presenting with recurrent episodes of CSE, which became seizure-free with Triptorelin treatment. Triptorelin is a gonadotropin analog, which causes amenorrhea by suppressing hormonal fluctuations. Another case in which Recurrent Catamenial Nonconvulsive Status Epilepticus (CNSE) was presented in a 21-year-old woman. Around the first episode of CNSE, she was diagnosed with Polycystic Ovary Syndrome, she used progesterone vaginal pessaries, with no effect on seizures. The patient received Norethisterone for six months, after this treatment episodes of CNSE were no further reported. Menstrual cycle and seizure calendar are important in CE. This documentation and video-electroencephalogram help the diagnosis.

**Conclusion.** Recurrent CSE can also occur in CE, CSE is infrequently noted in the literature. This phenomenon and hormonal treatment should be considered in female patients.

### 56. SEVERE HYPOTENSIUM AS A STROKE MIMIC

Author: Vasileva Maria

Co-author: Iotaru Diana, Crivonucica Igor, Zota Eremie, Vasileva Irina, Groppa Stanislav

Scientific adviser: Stanislav Groppa, PhD, Professor, Academician of the Academy of Sciences of the Republic of Moldova, Neurology Department No. 2, Nicolae Testemițanu State University of Medicine and Pharmacy of the Republic of Moldova.

**Introduction.** Stroke mimics are specific conditions that present with an acute neurological deficiency simulating acute stroke and constitute approximately 30% of all acute stroke admissions. While often overlooked, electrolyte abnormalities is a rare but important reversible cause of the acute focal neurological deficit and should remain on the differential diagnosis. In one stroke study, metabolic disorders accounted for 30% of stroke mimics. Hypokalemia is one of the most common electrolyte abnormalities encountered in medical practice. An accurate diagnosis can be provided by a careful history and well-timed testing.

**Case presentation.** An 83-year-old man, presented at the Emergency Department (ED), with first symptoms of hemiparesis and motor aphasia. Ischemic stroke was preliminarily diagnosed based on acute onset of clinical manifestation and medical history of hypertension, atrial fibrillation, and recent myocardial infarction. Before the admission, our patient had diarrhea for two days. On Computer tomography (CT) patient developed cardiac arrest and it was successfully resuscitated. Brain CT scan showed fusiform aneurysmal dilatation of the basilar artery. The electrocardiogram showed normal sinus rhythm with a mildly flattened T-wave. Cardiac markers- troponins were in the reference ranges. Glucose levels (HemoS), but serum potassium level was low (Elium1). The potassium correction was started and the patient's neurological deficit rapidly resolved. 24 hours brain CT scan didn't reveal a new consistent abnormality. Brain magnetic resonance imaging was performed, also without ischemic lesions. Severe hypokalemia was diagnosed on our patient.

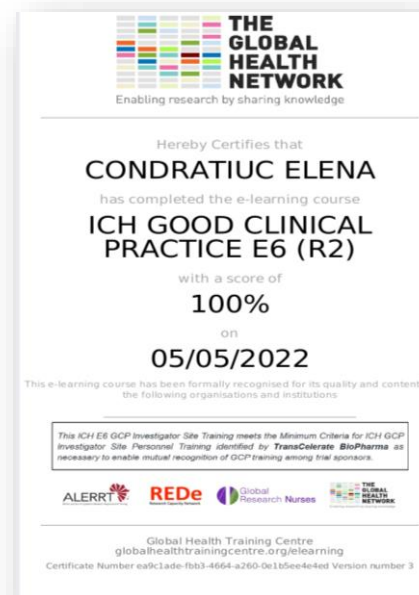
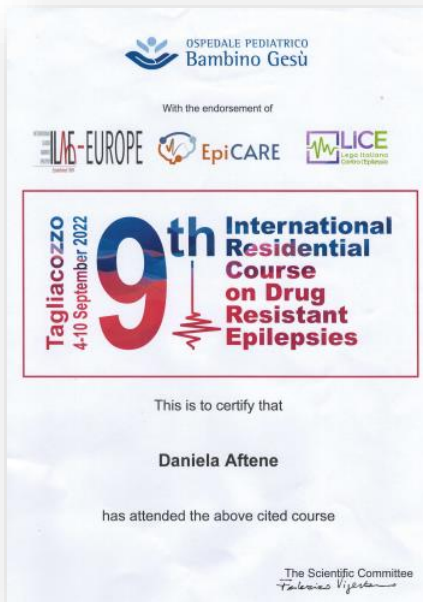
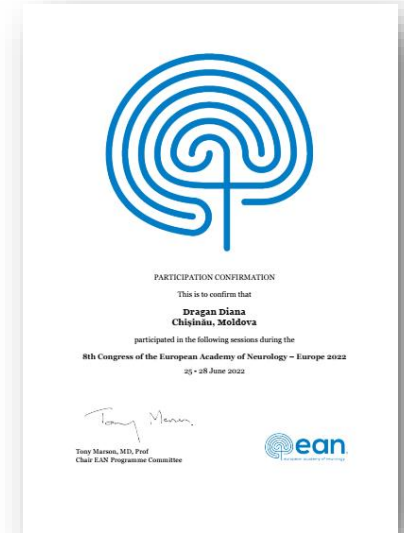
**Discussion.** This case illustrates that mimicking hypokalemia can induce a unilateral motor deficit, as stroke is such a condition being rarely described previously in the literature, but remains an important diagnosis in the ED. The pathophysiology of bilateral motor deficit in acute hypokalemic hemiparesis remains to be unknown. Previously, only one case was reported with hemiparesis due to severe hypokalemia.

**Conclusion.** We present an atypical case of hypokalemia which induces hemiparesis. So, physicians should be alert about these conditions. The correct diagnosis can be lifesaving.

# Participări la manifestări științifice internaționale



HR EXCELLENCE IN RESEARCH





## DISTROFIA MUSCULARĂ DUCHENNE: PROTOCOL CLINIC NAȚIONAL

Hadjiu Svetlana<sup>1,2</sup>, Sacară Victoria<sup>2</sup>, Paliu Ina<sup>1,2</sup>, Sciuca Svetlana<sup>1,2</sup>, Secu Doina<sup>2</sup>, Rodoman Iulea<sup>1,2</sup>, Călcăi Cornelia<sup>1,2</sup>, Revenco Ninel<sup>1,2</sup>

<sup>1</sup> Universitatea de Stat de Medicină și Farmacie "Nicolae Testemițanu",

<sup>2</sup> IMSP Institutul Mamei și Copilului,

<sup>3</sup> Centrul National de Epileptologie, Chisinau, Republica Moldova

## EPILEPTIC ENCEPHALOPATHIES IN CHILDREN: INVOLVEMENT OF COGNITIVE FUNCTIONS

Feghiu Ludmila<sup>1,3</sup>, Hadjiu Svetlana<sup>1,2</sup>, Sprincean Mariana<sup>1,2</sup>, Cuzneț Ludmila<sup>1,2</sup>, Grîu Corina<sup>1</sup>, Lupușor Nadejda<sup>1,2</sup>, Călcăi Cornelia<sup>1,2</sup>, Groppa Stanislav<sup>1,3</sup>

<sup>1</sup> State University of Medicine and Pharmacy "N. Testemițanu", Chisinau, Republic of Moldova

<sup>2</sup> Mother and Child Institute, Chisinau, Republic of Moldova

<sup>3</sup> Institute of Emergency Medicine, National Epileptology Center Chisinau, Republic of Moldova

## PARTICULARITIES IN THE TREATMENT OF WEST SYNDROME

Hadjiu Svetlana<sup>1,2</sup>, Călcăi Cornelia<sup>1,2</sup>, Feghiu Ludmila<sup>1,3</sup>, Cuzneț Ludmila<sup>1,2</sup>, Lupușor Nadejda<sup>1</sup>, Grîu Corina<sup>1</sup>, Tihai Olga<sup>1</sup>, Sprincean Mariana<sup>1,2</sup>, Revenco Ninel<sup>1,2</sup>, Groppa Stanislav<sup>1,3</sup>

<sup>1</sup> Universitatea de Stat de Medicină și Farmacie "Nicolae Testemițanu"

<sup>2</sup> IMSP Institutul Mamei și Copilului

<sup>3</sup> Centrul National de Epileptologie, Chisinau, Republica Moldova

## NEUROLOGICAL EVOCATIVE SIGNS IN CONGENITAL DISORDERS OF GLYCOSYLATION

Blanita Daniela<sup>1</sup>, Boiciuc Chiril<sup>1</sup>, Hadjiu Svetlana<sup>1,2</sup>, Usurelu Natalia<sup>1</sup>

<sup>1</sup> IMSP Institute of Mother and Child, Chisinau, Republic of Moldova

<sup>2</sup> State University of Medicine and Pharmacy, "Nicolae Testemițanu", Chisinau, Republic of Moldova

## IMAGING CHANGES IN SPASTIC CEREBRAL PARALYSIS IN CHILDREN

Cuzneț Ludmila<sup>1,2</sup>, Hadjiu Svetlana<sup>1,2</sup>, Călcăi Cornelia<sup>1,2</sup>, Feghiu Ludmila<sup>1,3</sup>, Lupușor Nadejda<sup>1</sup>, Grîu Corina<sup>1</sup>, Tihai Olga<sup>1</sup>, Racoviță Stela<sup>1</sup>, Sprincean Mariana<sup>1,2</sup>, Revenco Ninel<sup>1,2</sup>

<sup>1</sup> "Nicolae Testemițanu" State University of Medicine and Pharmacy, Chisinau

<sup>2</sup> IMSP Mother and Child Institute, Chisinau

<sup>3</sup> National Epileptology Center, Chisinau, Republic of Moldova

## COGNITIVE AFFECTIVE SYNDROME AND NEUROVEGETATIVE SYMPTOMS IN PATIENTS WITH CEREBELLOUS TUMORS IN THE LATE POSTOPERATIVE PERIOD

Grîu Corina<sup>1</sup>, Litovenco A.<sup>2</sup>, Călcăi Cornelia<sup>1,2</sup>, Feghiu Ludmila<sup>1,3</sup>, Lupușor Nadejda<sup>1,2</sup>, Cuzneț Ludmila<sup>1,2</sup>, Sprincean Mariana<sup>1,2</sup>, Hadjiu Svetlana<sup>1,2</sup>

<sup>1</sup> State University of Medicine and Pharmacy "N. Testemițanu", Chisinau, Republic of Moldova

<sup>2</sup> IMSP Mother and Child Institute, Chisinau, Republic of Moldova

<sup>3</sup> National Epileptology Center, Chisinau, Republic of Moldova



## VALUE OF IMMUNOENZYMATIC BIOMARKERS IN THE EVOLUTION OF STROKE IN CHILDREN

Sprincean Mariana<sup>1,2</sup>, Hadjiu Svetlana<sup>1,2</sup>, Călcăi Cornelia<sup>1,2</sup>, Lupușor Nadejda<sup>1,2</sup>, Grîu Corina<sup>1</sup>, Feghiu Ludmila<sup>1</sup>, Cuzneț Ludmila<sup>1,2</sup>, Racoviță Stela<sup>1</sup>, Tihai Olga<sup>1</sup>, Revenco Ninel<sup>1,2</sup>, Groppa St.<sup>1,3</sup>

<sup>1</sup> "Nicolae Testemițanu" State University of Medicine and Pharmacy,

<sup>2</sup> IMSP Institute of Mother and Child,

<sup>3</sup> National Center for Epileptology, Chisinau, Republic of Moldova

## NEUROLOGICAL SYNDROMES ASSOCIATED WITH SARS-COV-2 IN CHILDREN ACCORDING TO AGE

Constantin Olga<sup>1</sup>, Calcii Cornelia<sup>1,2</sup>, Sprincean Mariana<sup>1,2</sup>, Feghiu Ludmila<sup>1,3</sup>, Calistru Iulia<sup>1</sup>, Calistru Andrei, Hadjiu Svetlana<sup>1,2</sup>

<sup>1</sup> Pediatric Neurology Clinic of the Pediatrics Department, Nicolae Testemițanu State University of Medicine and Pharmacy

<sup>2</sup> IMSP Mother and Child Institute

<sup>3</sup> National Center for Epileptology, Chisinau, Republic of Moldova

## THE NEW TRENDS IN IMMUNOENZYMATIC EXAMINATION OF EPILEPSY

Calcii Cornelia<sup>1,2</sup>, Hadjiu Svetlana<sup>1,2</sup>, Feghiu Ludmila<sup>1,3</sup>, Cuzneț Ludmila<sup>1,2</sup>, Lupușor Nadejda<sup>1</sup>, Grîu Corina<sup>1</sup>, Tihai Olga<sup>1</sup>, Sprincean Mariana<sup>1,2</sup>, Page Ninel<sup>1,2</sup>, Groppa Stanislav<sup>1,3</sup>

<sup>1</sup> State University of Medicine and pharmacy "Nicolae Testemițanu",

<sup>2</sup> IMSP Institute of Mother and Child Health Care,

<sup>3</sup> National Epileptology Center, Chisinau, Republic of Moldova

## THE IMPORTANCE OF MELATONIN IN POST-STROKE (PEDIATRIC) REHABILITATION

Nadejda Lupușor<sup>1</sup>, Svetlana Hadjiu<sup>1,2</sup>, Mariana Sprincean<sup>1,2</sup>, Cornelia Călcăi<sup>1,2</sup>, Ludmila Feghiu<sup>1,3</sup>, Corina Grîu<sup>1</sup>, Cuzneț Ludmila<sup>1,2</sup>, Adrian Lupușor<sup>1,4</sup>, Ninel Revenco<sup>1,2</sup>

<sup>1</sup> Nicolae Testemițanu State University of Medicine and Pharmacy of the Republic of Moldova,

<sup>2</sup> IMSP Mother and Child Institute

<sup>3</sup> National Center for Epileptology

<sup>4</sup> Institute of Neurology and Neurosurgery „Diomid Gherman”

## GENETIC VARIATIONS IN MALE INFERTILITY

Racoviță Stela<sup>1</sup>, Sprincean Mariana<sup>1,2</sup>, Moșin Veaceslav<sup>1</sup>, Hadjiu Svetlana<sup>1,2</sup>, Revenco Ninel<sup>1,2</sup>

<sup>1</sup> PI "Nicolae Testemițanu" State University of Medicine and Pharmacy

<sup>2</sup> IMSP Mother and Child Institute

## CYCLE GENE POLYMORPHISM FOLATED IN MOTHERS OF CHILDREN WITH CONGENITAL CEREBRAL MALFORMATIONS

Tihai Olga<sup>1</sup>, Hadjiu Svetlana<sup>1,2</sup>, Mariana Sprincean<sup>1,2</sup>, Natalia Barbova<sup>1,2</sup>, Vladimir Egorov<sup>1,2</sup>, Ninel Revenco<sup>1,2</sup>

<sup>1</sup> „Nicolae Testemițanu” State University of Medicine and Pharmacy,

<sup>2</sup> IMSP Mother and Child Institute, Chisinau, Republic of Moldova

## CLINICAL AND PARACLINICAL FEATURES OF SPINAL CORD STROKE IN CHILDREN: CASE REPORT

Istratic Irina<sup>1</sup>, Calcii Cornelia<sup>1,2</sup>, Antohi Ana<sup>2</sup>, Pîrțu Lucia<sup>1,2</sup>, Moldovanu Maria<sup>1,2</sup>, Paliu Ina<sup>1,2</sup>, Hadjiu Svetlana<sup>1,2</sup>

<sup>1</sup> Universitatea de Stat de Medicină și Farmacie "Nicolae Testemițanu"

<sup>2</sup> IMSP Institutul Mamei și Copilului

# Participări la manifestări științifice naționale



HR EXCELLENCE IN RESEARCH

© SPRÎNCEAN MARIANA<sup>1,2</sup>, HADJIU SVETLANA<sup>1,2</sup>, CĂLCÎI CORNELIA<sup>1,2</sup>, LUPUȘOR NADEJDA<sup>1,2</sup>, GRÎU CORINA<sup>1</sup>, FEGHIU LUDMILA<sup>1</sup>, CUZNEȚ LUDMILA<sup>1,2</sup>, RACOVÎȚĂ STELA<sup>1</sup>, TIHAI OLGA<sup>1</sup>, REVENCO NINEL<sup>1,2</sup>, GROPPA ST.<sup>1,2</sup>

SPRÎNCEAN MARIANA<sup>1,2</sup>, HADJIU SVETLANA<sup>1,2</sup>, CĂLCÎI CORNELIA<sup>1,2</sup>, LUPUȘOR NADEJDA<sup>1,2</sup>, GRÎU CORINA<sup>1</sup>, FEGHIU LUDMILA<sup>1</sup>, CUZNEȚ LUDMILA<sup>1,2</sup>, RACOVÎȚĂ STELA<sup>1</sup>, TIHAI OLGA<sup>1</sup>, REVENCO NINEL<sup>1,2</sup>, GROPPA ST.<sup>1,2</sup>

## RESURSE DE AMELIORARE A DEZVOLTĂRII COPIILOR CU UNELE PATOLOGII GENETICE

<sup>1</sup> Universitatea de Stat de Medicină și Farmacie "Nicolae Testemițanu",

<sup>2</sup> IMSP Institutul Mamei și Copilului,

<sup>3</sup> Centrul Național de Epileptologie, Chișinău, Republica Moldova

Datele experimentului de constatare: nivelul de dezvoltare a celor trei comportamente de bază la copiii cu sindromul Down și sindromul X-fragil, cu vârsta de până la 3 ani

Vârsta, ani	Comportamente	Psiho-motor		Socio-afectiv		Cognitiv-verbal		Psiho-motor și cognitiv-verbal		Psiho-motor și cognitiv-verbal	
		1	2	3	4	5	6	7	8	s. Down	s. X-fragil
0-1	Standard	3,5	3,4	3,4	3,2	3,5	3,5	3,3	3,5	3,4	3,5
0-1	s. Down	0,27	0,2	0,33	0,27	0,2	0,2			0,17	0,13
0-1	s. X-fragil	1,41	1,38	0,17	0,24	0,14	0,21			0,17	0,17
1-2	Standard	3,4	3,5	3,5	3,4	3,5	3,5	3,4	3,6	3,5	3,4
1-2	s. Down	0,27	0,31	0,34	0,31	0,34	0,2		0,1	0,13	0,13
1-2	s. X-fragil	1,40	1,40	0,25	0,18	0,32	0,32		0,22	0,18	0,18
2-3	Standard	3,6	3,3	3,4	3,3	3,6	3,3	3,4	3,5	3,4	3,4
2-3	s. Down	0,39	0,31	0,27	0,15	0,23	0,11		0,15	0,19	0,19
2-3	s. X-fragil	1,39	1,35	0,31	0,23	0,31	0,19		0,12	0,15	0,15

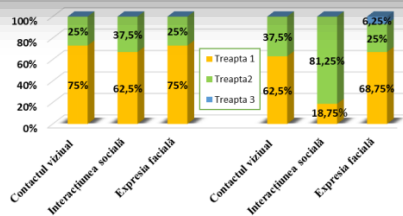
© DOLINSCHII AMALIA<sup>1</sup>, HADJIU SVETLANA<sup>1,2</sup>, REVENCO NINEL<sup>1,2</sup>, CĂLCÎI CORNELIA<sup>1,2</sup>

DOLINSCHII AMALIA<sup>1</sup>, HADJIU SVETLANA<sup>1,2</sup>, REVENCO NINEL<sup>1,2</sup>, CĂLCÎI CORNELIA<sup>1,2</sup>

## EFICACITATEA TERAPIEI ABA ASUPRA COMPORTAMENTULUI LA COPIII CU AUTISM INFANTIL

<sup>1</sup>Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu”, Departamentul Pediatrie

<sup>2</sup> IMSP Institutul Mamei și Copilului



1. Etapa inițială a terapiei ABA, % 2. Etapa finală a terapiei ABA, %.

Dinamica dezvoltării relaționării la copiii cu autism infantil după terapia ABA, %.



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HADJIU SVETLANA<sup>1,2</sup>, CĂLCÎI CORNELIA<sup>1,2</sup>, LUPUȘOR NADEJDA<sup>1,2</sup>, FEGHIU LUDMILA<sup>1</sup>, GRÎU CORINA<sup>1</sup>, CUZNEȚ LUDMILA<sup>1,2</sup>, RACOVÎȚĂ STELA<sup>1</sup>, TIHAI OLGA<sup>1</sup>, SPRÎNCEAN MARIANA<sup>1,2</sup>, REVENCO NINEL<sup>1,2</sup>

## PARTICULARITĂȚI CLINICO-DIAGNOSTICE ALE ENCEFALOPATIILOR MITOCONDRIALE

<sup>1</sup> Universitatea de Stat de Medicină și Farmacie "Nicolae Testemițanu",

<sup>2</sup> IMSP Institutul Mamei și Copilului,

<sup>3</sup> Centrul Național de Epileptologie, Chișinău, Republica Moldova

Rezultatele investigațiilor paraclinice						
Investigații paraclinice	Canal 1, 7 (MELAS)	Canal 2 (NARP)	Canal 3 (MERRF)	Canal 4 (Kearns)	Canal 5 (MELAS)	Canal 6 (Leigh)
Hepcia musculară	Fibre musculare roșii în lambouri	Dilatate lipidice intracelulare	Fibre musculare roșii în lambouri	Fibre musculare roșii în lambouri	Fibre musculare roșii în lambouri	-
EMG	Potențiale miopazice	Semne de neuropatie periferică senzorimotorie	Fără modificări esențiale	Fără modificări esențiale	Potențiale miopazice	Fără modificări esențiale
RMN	Focar hipodens în proiecția lobului parietal de tip ischemic, atrofie corticală cu dilatare ventriculară moderată	Zone hipertense în nivelul ganglionilor bazali și a trunchiului	Calcificări în ganglionii bazali	Atofie corticală cu dilatare ventriculară moderată	Focar hipodens în proiecția lobului parietal de tip ischemic	Leziuni difuze simetrice și gino corticale, ganglionii bazali și a cerebelului cu hipodensitate incompletă
Biochimia	Lactacidă	Lactacidă	Lactacidă	Lactacidă, hiperamonemie	Lactacidă	Lactacidă (și în LCR), pirruromie (și în LCR), hiperamonemie, hiperamonemie

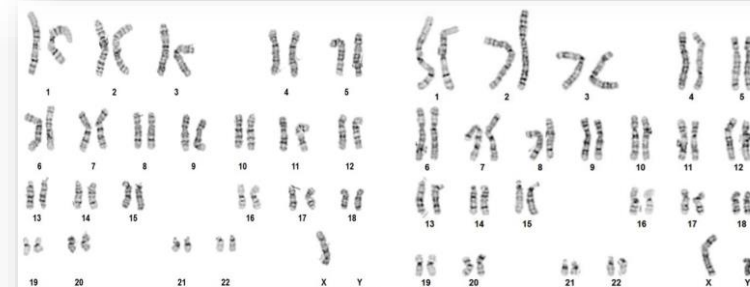
© RACOVÎȚĂ STELA<sup>1</sup>, SPRÎNCEAN MARIANA<sup>1,2</sup>, MOȘIN VEACESLAV<sup>1</sup>, CAPCELEA SVETLANA<sup>1</sup>, HADJIU SVETLANA<sup>1,2</sup>, REVENCO NINEL<sup>1,2</sup>

RACOVÎȚĂ STELA<sup>1</sup>, SPRÎNCEAN MARIANA<sup>1,2</sup>, MOȘIN VEACESLAV<sup>1</sup>, CAPCELEA SVETLANA<sup>1</sup>, HADJIU SVETLANA<sup>1,2</sup>, REVENCO NINEL<sup>1,2</sup>

## 45,X/46,XY LA BĂRBAT CU INFERTILITATE: RAPORT DE CAZ CLINIC

<sup>1</sup> IP Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu”

<sup>2</sup> IMSP Institutul Mamei și Copilului



a

b

Fig. 1. Cariotip 45,X/46,XY (20%/80%) Conform ISCN 2016, la bărbat cu vârsta de 46 de ani

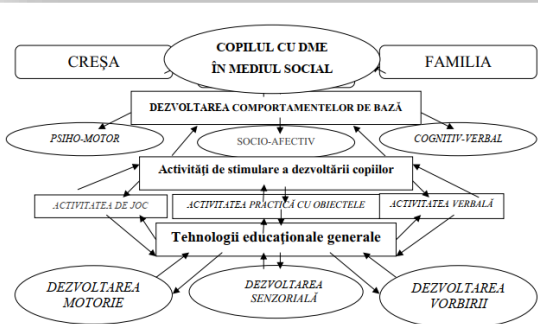


Fig. 1. Modelul utilizării resurselor psihopedagogice de ameliorare a dezvoltării copiilor cu deficiențe mentale ereditare.



# Participări la manifestări științifice naționale



**COUPLING OF TRANSCRANIAL MAGNETIC STIMULATION (TMS) WITH HIGH DENSITY ELECTROENCEPHALOGRAPHY (HDEEG) IN GENERALIZED FORMS OF EPILEPSY.**

Leahu Pavel<sup>1</sup>  
Scientific adviser: Lisnic Vitalie<sup>2</sup>

<sup>1</sup>Department of Neurology No.2, Nicolae Testemitanu University,  
<sup>2</sup>Department of Neurology No.1, Nicolae Testemitanu University.



**Conferința națională cu participare internațională Bienala Chișinău-Sibiu, ediția a V-a**

Conferința națională cu participare internațională Bienala Chișinău-Sibiu, ediția a V-a „MANAGEMENTUL INTERDISCIPLINAR AL COPILULUI” organizată de Universitatea de Stat de Medicină și Farmacie „Nicolae Testemitanu” și Facultatea de Medicină de la Universitatea “Lucian Blaga” din Sibiu (România) sub egida Societății de Pediatrie din Moldova

**13-14 mai 2022**

13:20 – 13:40	Resurse de ameliorare a dezvoltării copiilor cu unele patologii genetice	Conf. Mariana Sprincean	USMF „Nicolae Testemitanu”
13:40 – 14:00	Eficacitatea terapiei ABA asupra comportamentului la copiii cu autism infantil	Conf. Cornelia Călcii	USMF „Nicolae Testemitanu”
14:00 – 14:20	Particularități clinico-diagnostice ale encefalopatiilor mitocondriale	Prof. Svetlana Hadjiu	USMF „Nicolae Testemitanu”



**BRAIN GREY MATTER ABNORMALITIES ASSOCIATED WITH MYOCLONIC SEIZURES**

Vataman Anatolie<sup>1</sup>, Ciolac Dumitru<sup>2</sup>, Chiosa Vitalie<sup>1</sup>

Scientific adviser:  
**METHODS OF ACTIVATION IN ELECTROENCEPHALOGRAPHY – BETWEEN PERSPECTIVES AND OPPORTUNITIES**

Aftene Daniela<sup>1</sup>, Chiosa Vitalie<sup>1</sup>

Scientific adviser: Groppa Stanislav  
<sup>1</sup>Department of Neurology No.2, Nicolae Testemitanu University,  
<sup>2</sup>Institute of Emergency Medicine, National Center of Epileptology, Institute of Emergency Medicine, Nicolae Testemitanu University,  
<sup>3</sup>Department of Neurology No.1, Nicolae Testemitanu University.

**AFFECTIVE DISORDERS ACCORDING TO GENDER AND MARITAL STATUS IN EPILEPSY**

Doțen Natalia<sup>1,2,3</sup>, Aftene Daniela<sup>1,2</sup>

Scientific adviser: Groppa Stanislav  
<sup>1</sup>Laboratory of Neurobiology and Medical Genetics, Nicolae Testemitanu University,  
<sup>2</sup>National Center of Epileptology, Institute of Emergency Medicine,  
<sup>3</sup>Laboratory of Neurobiology and Medical Genetics, Nicolae Testemitanu University,  
<sup>4</sup>Moldova State University  
<sup>5</sup>Department of Neurology No.2, Nicolae Testemitanu University.

10:00 – 10:10	Caracteristicile statusului epileptic refractar la copii (caz clinic)	Conf. Cornelia Călcii	USMF „Nicolae Testemitanu”
10:10 – 10:20	Impactul encefalopatiilor epileptice și de dezvoltare asupra neurodezvoltării	Asist. univ. Ludmila Feghiu	USMF „Nicolae Testemitanu”
10:20 – 10:30	Diagnosticul genetic al malformațiilor congenitale cerebrale folat-dependente la copii	Dr. Olga Tihai	USMF „Nicolae Testemitanu” Spitalul Clinic Municipal de Copii “Valentin Ignatenco”
10:30 – 10:40	Manifestările neurologice în SARS-CoV-2 la copii	Dr. Olga Constantin	USMF „Nicolae Testemitanu”
10:40 – 10:50	Rezultatele neurologice la distanță la copiii cu accident vascular cerebral ischemic	Dr. Lupușor Nadejda	USMF „Nicolae Testemitanu”



# Promovarea proiectului și a rezultatelor obținute în anul 2022



HR EXCELLENCE IN RESEARCH

GROPPA, Stanislav. Radio Vocea Speranței Republica Moldova.



## Conferința de presă privind fondarea Laboratorului de bioinformatică și medicină computațională la Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu” (30.06.2022)

### PRIMUL LABORATOR DE BIOINFORMATICĂ ȘI MEDICINĂ COMPUTAȚIONALĂ – FONDAT LA USMF „NICOLAE TESTEMITANU”

PUBLICAT: 01.07.2022 VIZUALIZĂRI: 293



La Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu” a fost creat Laboratorul de bioinformatică și medicină computațională în cadrul Centrului de Cercetare în domeniul Sănătății și Biomedicinii al Institutului Național de Cercetare în Medicină și Sănătate (INCMS), în baza deciziei Senatului universitar. Despre aceasta a anunțat academicianul, prorector pentru activitatea de cercetare, în cadrul evenimentului de inaugurare de cercetare.

Potrivit prorectorului, instituirea Laboratorului de bioinformatică și medicină constituie un pas important pentru Universitate și, cu siguranță, va avea procesul de pregătire a cadrelor de înaltă calificare în Republica Moldova și va calitatea asistenței medicale și în cea a vieții pacienților. Fondarea Laboratorului este rezultatul unui parcurs de fortificare a domeniului cercetării și inovării „Nicolae Testemițanu”, contribuind la înțelegerea datelor de importanță biologică.



GROPPA, Stanislav  
Healthtech Forum 2022



HADJIU, Svetlana. Radio Vocea Speranței. Despre Encefalopatia la copii



# Distincții obținute

## European Epilepsy Service Award 2022

### Stanislav Groppa

Born in the Republic of Moldova, the well-known scientist and Academician of the Academy of Sciences of Moldova, Stanislav GROPPA, has an impressive career. Currently, he leads the Neurology Department at State University of Medicine and Pharmacy "Nicolae Testemitanu" and is the vice-rector of Research activity at the same institution. In addition he is the President of the Moldavian Society of Neurology and the President of Moldavian chapter of International League Against Epilepsy (ILAE).

Professor GROPPA, started his professional and academic career by studying medicine at Nicolae Testemitanu State University of Medicine and Pharmacy (SUMP). During his studies he developed a particular interest in neurology. Therefore, he continued his education with a residency in neurology and a PhD program at Moscow Medical University. He was trained as a neurologist and clinical neuroscientist in a series of fellowships and traineeship, including one at Bethel Epilepsy Center.

In 1995, at the age of 29 years old, he became a Doctor of Medical Sciences and vice rector of Nicolae Testemitanu SUMP. At the age of 35 he finished his postdoctoral and became a habilitated doctor in medical sciences. 4 years later he was already conferred the title of university professor. In 2012 Mr Groppa, became an associate member of the Academy of Sciences of Moldova (ASM). And Since 2014, he has served as the vice president of ASM.

Mr Groppa's main expertise is Clinical neuroscience. He conducts teaching and research regarding the function of the brain - from a molecular level to the effect on society. Throughout his career he has committed towards organizing and promoting educational programs and improving the health system in Moldova. His scientific work has contributed to a better understanding, and therefore a better organization and implementation of the health services in epilepsy, stroke, Alzheimer diseases and other brain pathologies. His main interests in neuroscience research are: drug resistant epilepsy, drug development for refractory epilepsy, cognitive neuroscience and neuroepidemiology. He is the author and co-author of more than 180 peer-reviewed publications, books and book chapters.

During his career he has been actively involved in educating and training young neurology specialists. He has a distinctive number of PhD and postdoc students who under his supervision conducted and defended their thesis, out of whom, 5 students were awarded with habilitation in doctoral sciences. As a Vice-Rector for Research activity he is the founder of the National Health Institute in Medicine and Research of Nicolae Testemitanu SUMP. He is an advocate for implementing research based medical education at Nicolae Testemitanu SUM.

Professor Groppa has dedicated an impressive part of his career towards raising general awareness and understanding of epilepsy; and supporting national health authorities in identifying epilepsy needs and advancing epilepsy education, training, treatment, research, and prevention. Professor Stanislav Groppa has been actively involved with various international epilepsy organizations in planning and developing various research projects and public health initiatives as well as organizing epilepsy education and training for neurology specialists.





## Distincții obținute

### SPIRIT OF EXCELLENCE AWARD WINNERS AND NOMINEES 2022



#### ROSSEN KALPACHKI

UMHAT St. Anna where Prof Kalpachki heads up the Neurological Clinic is Bulgaria's top-performing hospital, a six-times Diamond award-winner and leading provider of thrombolysis, and has provided training to 22 hospitals many of which have started treating thanks to Prof Kalpachki's guidance.



#### PETR JAŠŠO

Chief of Education in the Moravian Silesian Region in Ostrava, Czech Republic, this EMS innovator and pioneer was the first EMS member of the Angels Steering Committee in his country. His contributions to stroke care include his role in ASLS centre establishment and the EMS Angels awards.



#### ANGELA KONZE

A radiologist at Ospedale Santa Maria Nuova in Firenze, Italy, Dr Konze was instrumental in forming a partnership with Angels that lead to a reduction in treatment time to 35 minutes and Italy's first ESO Angels Diamond award. Her innovative, dedicated work now impacts the Central Tuscany region.



#### STANISLAV GROPPA

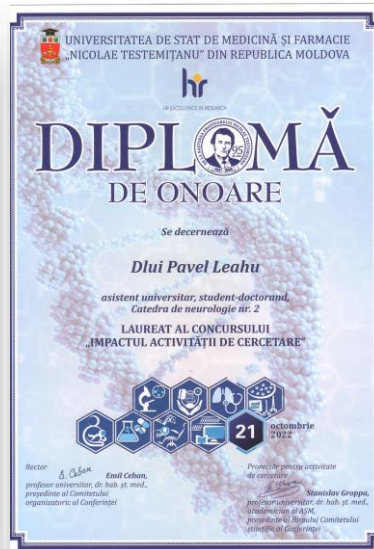
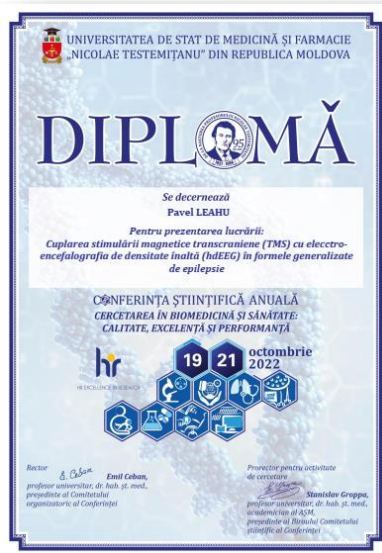
Prof Groppa is a specialist in neurology at the State University of Medicine & Pharmaceuticals Nicolae Testemitanu, and a member of the Academy of Sciences of Moldova. A leader in modernising stroke care in his country, he plays a key role in the Eastern Europe stroke care programme, ESO EAST.



# Aprecierea rezultatelor obținute



HR EXCELLENCE IN RESEARCH



Implementarea Fișei de evaluare a  
pacienților cu epilepsie supuși  
testării genetice.  
Certificat de inovator  
Nr. 5917 din 03 iunie 2022.







**IEC 2023**

**Certificate of Scholarship** oferit conf. univ. Vitalie Chiosa  
din partea prof. Helen Cross, presedinte ILAE

# Aprecierea rezultatelor obținute

## Expoziția Internațională de Inovație și Transfer Tehnologic

"EXCELLENT IDEA 2023"

- 2 MEDALII DE AUR





# Aprecierea rezultatelor obținute

## I-a Școală de Neuroștiințe din Republica Moldova 2023

