



FOUNDATION OF THE  
SOCIETY FOR THE STUDY OF  
NEUROPROTECTION AND  
NEUROPLASTICITY



International  
School of Neurology



**UMF**  
IULIU HATIEGANU  
UNIVERSITY OF  
MEDICINE AND PHARMACY  
CLUJ-NAPOCA



Institute for  
Neurological Research  
and Diagnostic



FUNDATIA JURNALULUI  
**Journal of Medicine**  
and Life



# Seminars

Department of Neurosciences  
University of Medicine and  
Pharmacy "Iuliu Hatieganu"  
Cluj-Napoca | Romania

**16 MARCH, 2022**

VIRTUAL MEETING



# Welcome Address

It is a pleasure to welcome you to the 85<sup>th</sup> edition Seminars 16 March, 2022. The seminar is hosted by the Department of Neurosciences, Faculty of Medicine, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca. This seminar aims to establish itself as a highly useful framework that will enable local specialists to benefit from the expertise of our invited speakers who are part of associated international faculty of our Department of Neurosciences Cluj-Napoca, Romania and RoNeuro Science network. Our scope is to flourish over years and set up an educational vector aiming to meet our junior and senior specialists' needs.

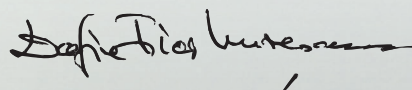
In contrast to large international conferences, the intention behind these seminars is to create an informal and intimate setting, which hopefully will stimulate open discussions.

Due to the uncertainties about the continuing impact of the COVID-19 pandemic, our events will be held in the virtual space, for the time being. As organizers, we would therefore be deeply grateful if you participate and share your time with us.

We are looking forward to your active participation in this educational event!

With consideration,

Prof. Dr. Dafin F. Muresanu,  
Chairman Department of Neurosciences, Faculty of Medicine,  
"Iuliu Hatieganu" University of Medicine and Pharmacy,  
Cluj-Napoca, Romania



## Program Coordinator



### Dařin F. Mureřanu

President of the European Federation of NeuroRehabilitation Societies (EFNR)

Chairman of EAN Communication and Liaison Committee

Co-Chair EAN Scientific Panel Neurotraumatology

Past President of the Romanian Society of Neurology

Professor of Neurology, Chairman Department of Neurosciences "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

## International Guest Lecturer



### Vladimir Hachinski

Editor-in-Chief of Stroke Journal

Past President of the World Federation of Neurology

Founder of World Brain Alliance



# Organizers



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Academia de  
Științe Medicale  
din România



A photograph of a dandelion seed head, showing the intricate structure of the seeds and their long, thin filaments. The image is set against a dark, teal background. The text "SCIENTIFIC PROGRAM" is overlaid in white, bold, uppercase letters in the upper right quadrant of the image.

**SCIENTIFIC  
PROGRAM**

# Scientific program

**16 MARCH, 2022**

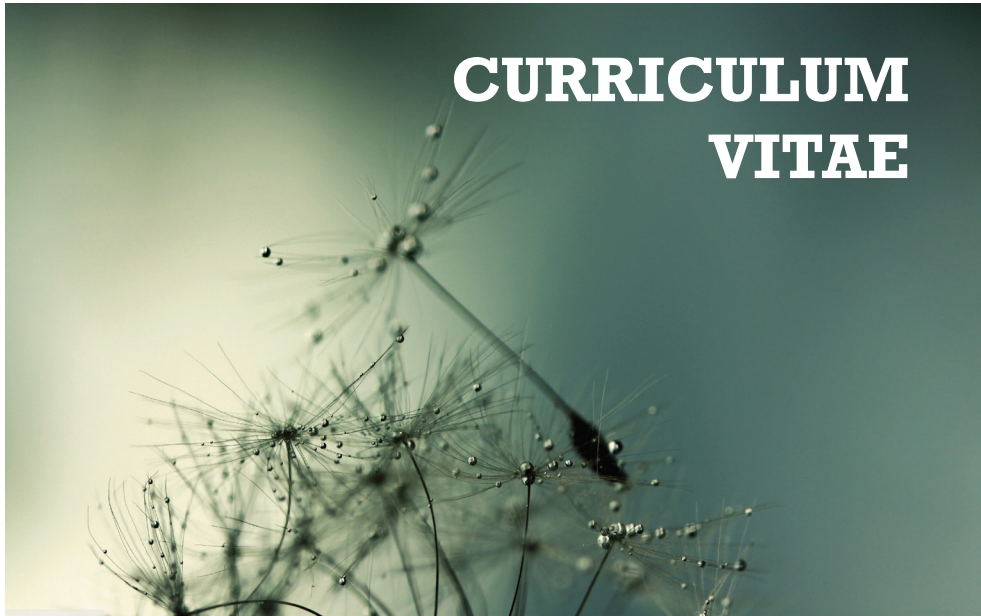
**VIRTUAL MEETING**

13:00 – 13:30      Brain health: the ultimate wealth  
Vladimir Hachinski / Canada

13:30 – 14:05      Stroke and Microcirculation  
Dafin F. Mureşanu / Romania



# **CURRICULUM VITAE**





# SPEAKER

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), Chairman Communication Committee of the European Academy of Neurology (EAN), Past President 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 (being Member of the American Neurological Association (ANA) - Fellow of ANA (FANA) since 2012) and 10 national ones, being part of the executive board of most of these societies. Professor Dafin F. Muresanu is also a specialist in Leadership and Management of Research and Health Care Systems (specialization in "Management and Leadership, Arthur Anderson Institute, Illinois, USA, 1998"; "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 500 scientific participations as "invited speaker" in national and international scientific events, a significant portfolio of scientific articles (260 papers indexed on Web of Science-ISI, H-index: 25) as well as contributions in monographs and books published by prestigious international publishing houses. Prof. Dr. Dafin F. Muresanu has been honoured with: „Dimitrie Cantemir" Medal of the Academy of The Republic of



**Dafin F.  
Muresanu**  
/Romania

# SPEAKER

Moldova in 2018, Ana Aslan Award 2018 - "Performance in the study of active aging and neuroscience", for the contribution to the development of Romanian medicine, National Order "Faithful Service" awarded by the President of Romania in 2017; "Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca, Faculty of Medicine, the "Iuliu Hatieganu Great Award 2016" for the best educational project in the last five years; the Academy of Romanian Scientists, "Carol Davila Award for Medical Sciences / 2011", for the contribution to the Neurosurgery book "Tratat de Neurochirurgie" (vol.2), Editura Medicala, Bucuresti, 2011; the Faculty of Medicine, "Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca "Octavian Fodor Award" for the best scientific activity of the year 2010 and the 2009 Romanian Academy "Gheorghe Marinescu Award" for advanced contributions in Neuroprotection and Neuroplasticity.



# SPEAKER

Dr. Vladimir Hachinski received his MD from the University of Toronto. After completing his residency training at the same university, he undertook a Cerebrovascular Laboratory Fellowship at the National Hospital for Nervous Diseases at Queen Square in London, England and a research fellowship at Bispebjerg Hospital in Copenhagen, Denmark.

He founded, with John W. Norris the world's first successful acute stroke unit that has become the standard of care and with David Cechetto discovered the key role of the insula of the brain in mediating sudden death. He introduced the concepts of multi-infarct dementia, leukoaraiosis and vascular cognitive impairment and devised the Hachinski ischemic score, (over 4000 citations) that remains the standard for identifying the vascular (treatable) component of cognitive impairment.

Dr. Hachinski was Editor-in-Chief of the journal *Stroke*, the leading publication in the field. He introduced 9 international editions and a unique author mentorship program. He has contributed over 1000 scientific papers, book chapters, editorials and other scholarly publications, with over 73,300 citations and rising: 2019: 5,376, 2020: 7,609, 2021: projected to be 9,369 (about one citation per hour), his h-index is 118. He is the author, co-author or editor or co-editor of 17 books including *Stroke: A Comprehensive Guide to Brain Attack*, co-authored with his daughter Larissa Hachinski, that was written to increase public awareness of brain attack, a term he coined to drive home the urgency of strokes. He edited "Treatable and Potentially Preventable Dementias", the first comprehensive and authoritative book covering the basis for the joint prevention of stroke and the management, delay, or prevention of some dementias. The book has been "Highly commended" by the British Medical Association.



**Vladimir  
Hachinski**  
/Canada

# ABSTRACTS



# Abstracts

## STROKE AND MICROCIRCULATION

DAFIN F. MUREȘANU  
/ROMANIA

Revascularization interventions have significantly improved the outcome of patients with acute ischemic stroke. Fibrinolytic agents (rtPA) are highly effective within a narrow therapeutic window but have shown limitations in large proximal arterial occlusions and are associated with serious adverse effects, particularly when administered beyond their intended timeframe. International treatment guidelines recommend thrombolytic therapy as the first line of treatment for acute ischemic stroke, followed by endovascular thrombectomy in eligible patients. This approach dissolves clots by plasminogen activation or mechanically removes them to re-establish blood flow in the brain. Effective cerebral revascularization is considered essential for preventing additional infarction of functionally inactive but viable brain tissue in the ischemic penumbra.

After the success of drugs and endovascular procedures in outcome-based clinical trials for acute ischemic stroke, the race to treat as many patients as possible began in conjunction with the resolved of precision medicine to tailor interventions up to the individual level. To evaluate outcomes of thrombolytic or endovascular therapies, recanalization, and reperfusion, although frequently used interchangeably, are not equivalents. The objective of recanalization is to reopen an occluded vessel, while reperfusion refers to the restoration of blood flow in a formerly occluded vascular territory, particularly at the level of cerebral microcirculation.

A plethora of evidence has recently proven that reperfusion is a much better indicator for post-stroke imaging (infarct volume, infarct growth, salvaged penumbra) and clinical outcomes (NIHSS). Recanalization is neither a prerequisite for reperfusion nor does it always lead to the latter. Full recanalization after rtPA or thrombectomy often fails to induce clinically significant reperfusion, due to a myriad of complex factors related to microvascular circulation, such as distal micro-emboli or extensive endothelial damage.





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