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ROMANIA

"IULIU HATIEGANU" UNIVERSITY
OF MEDICINE AND PHARMACY

DOCTORAL SCHOOL NEUROSCIENCE

PROGRAM

2020-2021 | SECTION 3

23 MARCH, 2021
VIRTUAL MEETING

PhD NEUROSCIENCE PROGRAM COORDINATOR

Dafin F. Mureşanu

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 LECTURERS

Marc Fisher

President World Stroke Organization

Professor of Neurology, Harvard Medical School

Emeritus Professor of Neurology, University of Massachusetts Medical School, USA

Natan M. Bornstein

WSO Board of Directors

Co-Chair EAN Stroke Scientific Panel

Chairman of the Israeli Neurological Association

Doctor Honoris Causa “Iuliu Hatieganu” University of Medicine and Pharmacy, Cluj-Napoca, Romania

PhD NEUROSCIENCE PROGRAM FACULTY
2020-2021

Claudio Bassetti / Switzerland

Ettore Beghi / Italy

Natan Bornstein / Israel

Michael Brainin / Austria

Anca Dana Buzoianu / Romania

Michael Chopp / USA

László Csiba / Hungary

Marc Fisher / USA

Urs Fischer / Switzerland

Ioan Ștefan Florian / Romania

Antonio Federico / Italy

Francesca Federico / Italy

Max Hilz / Germany

Wolf Dieter Heiss / Germany

Tudor Jovin / USA

Maurizio Leone / Italy

Dafin F. Mureșanu / Romania

Milija Mijajlovic / Serbia

Lăcrămioara Perju-Dumbravă / Romania

Maura Pugliatti / Italy

Johannes Vester / Germany

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COURSE PROGRAM

COURSE PROGRAM

23 MARCH, 2021

VIRTUAL MEETING

12:00 – 12:30	Acute stroke therapy: current status and future directions Marc Fisher /USA
12:30 – 13:00	Cryptogenic Stroke Marc Fisher /USA
13:00 – 13:30	Time is brain, TIA as an emergency Natan Bornstein /Israel
13:30 – 14:00	Management of symptomatic carotid stenosis Natan Bornstein /Israel

INTERNATIONAL GUEST LECTURERS

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), 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 Neurotraumatolgy (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 (231 papers indexed on Web of Science-ISI, H-index: 23) as well as contributions in monographs and books published by prestigious international publishing houses. Prof. Dr. Dafin F. Muresanu has been honoured with: „Dimitrie Cantemir" Medal of the Academy of The Republic of Moldova in 2018, Ana Aslan Award 2018 - "Performance in the study of active aging and neuroscience", for the contribution to the development of Romanian medicine, National Order "Faithful Service" awarded by the President of Romania in 2017; "Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca, Faculty of Medicine, the "Iuliu Hatieganu Great Award 2016" for the best educational project in the last five years; the Academy of Romanian Scientists, "Carol Davila Award for Medical Sciences / 2011", for the contribution to the Neurosurgery book "Tratat de Neurochirurgie" (vol.2), Editura Medicala, Bucuresti, 2011; the Faculty of Medicine, "Iuliu Hatieganu" University of Medicine and Pharmacy Cluj-Napoca "Octavian Fodor Award" for the best scientific activity of the year 2010 and the 2009 Romanian Academy "Gheorghe Marinescu Award" for advanced contributions in Neuroprotection and Neuroplasticity.

MARC FISHER

USA

Dr. Fisher was affiliated with the University of Massachusetts Medical School for 35 years and is currently an emeritus Professor of Neurology. He began work part-time at Beth Israel Deaconess Medical Center in Boston with an appointment at Harvard Medical School in August, 2014. He has a long track record in performing MRI-based experiments in rat stroke models to evaluate the presence and evolution of the ischemic penumbra. Using diffusion/perfusion MRI his experimental group has evaluated the effects of therapies on the progression of the diffusion/perfusion mismatch. Dr. Fisher has extensive experience in organizing and implementing clinical acute stroke therapy trials with a particular interest in imaging-based trials. He has performed these trials with co-investigators at multiple sites around the world. He has maintained an active clinical practice for many years with an emphasis on patients with cerebrovascular disorders as well as broad range of other neurological illnesses. He has published extensively and has published over 260 peer-reviewed articles with an h-index of 72 and has edited or co-edited 13 books. He currently serves as editor-in-chief of Stroke and will continue in that position until 2020.

NATAN BORNSTEIN
ISRAEL

EDUCATION

1970-73	University of Sienna, Medicine, Sienna, Italy
1973-79	Technion Medical School, Hifa, Medicine, MD, 1979

Date of receiving specialixation certificate: 11 September, 1984
Title of Doctoral dissertation: Dextran 40 in acute ischemic stroke
Name of Supervisor: Dr. Jacob Vardi

FURTHER EDUCATION

1978-83	Tel-Aviv University, Sackler Faculty of Medicine, neurology (residence), Israeli Board certified in Neurology, 1983
1979-83	Tel-Aviv University, Sackler Faculty of Medicine, Post graduate studies in Neurology
1984-87	Sunnybrook Medical Center, University of Toronto, M.R.C stroke, Fellowship

ACADEMIC AND PROFESSIONAL EXPERIENCE

1982-1995	Tel-Aviv University, Neurology, instructor
1991-present	European stroke Conference (ESC), Executive committee
1995-1999	Tel-Aviv University, Neurology, Senior lecturer
1995	Eliprodil CVD 715 clinical trial, Steering Committee
1995-1997	International Stroke Study (IST), Steering Committee
1995-1999	American Academy of Neurology, Member of the International Affairs Committee
1996	Asymptomatic Carotid Stenosis and Risk of Stroke(ACSRS), Advisory Committee
1996-present	The Mediterranean Stroke Society (MSS), President
1996-2002	EFNS, Management Committee
1997-2009	Israeli Neurological Association, Secretary
1999-present	Tel-Aviv University, Neurology, Associated Professor
2001- present	European Society Neurosonology and Cerebral Hemodynamics (ESNCH) Executive committee
2005-present	Neurosonolgy Research Group, Executive committee
2006-present	European Master in Stroke Medicine, Member of faculty
2006-2008	NEST II clinical Trial, Steering Committee
2006-present	SENTIS clinical Trial, Steering Committee
2006-present	CASTA Trial, Steering Committee
2006-present	Brainsgate clinical Trial, Steering Committee
2008- present	World Stroke Association (WSO), Vice president
2009-present	Israeli Neurological Association, Chairman
2009-present	European Stroke Organization (ESO), Member on the board of directors
2010-	NEST III clinical Trial, Steering Committee

PROFESSIONAL ACHIEVEMENTS- EDITORIAL BOARD

1991-present	Neurological Research Journal, Guest Editor
1991-present	STROKE, Member of the editorial board
1998-present	European Journal of Neurology, Member of the editorial board
1999-present	Journal of Cerebrovascular disease, Member of the editorial board
2000-present	Journal of Annals of Medical Science, Consulting Editor
2001-present	Journal of Neurological Science (Turkish), Member of the editorial board
2001-present	Acta Clinica Croatica, Member of the editorial Counsil
2003-present	Italian Heart Journal, International Scientific Board
2003-present	Journal of Neurological Sciences, Guest Editor
2004-present	Turkish Journal of Neurology, International Advisory Board
2005-present	Archives of Medical Sciences (AMS) , Member of the Editorial Board
2006-present	Journal of Cardiovascular Medicine, International Scientific Board
2006-present	International Journal of Stroke, Editorial Board
2006-present	Acta Neurologica Scandinavica, Editorial Board
2009-present	American Journal of Neuroprotection& Neurogeneration (AJNN) Member of the Editorial Board
2010	Neurosonology, International Editorial Board
2010	Frontiers in Stroke, Review Editor

PROFESSIONAL ACHIEVEMENTS- REVIEWER

1998-present	Lancet, Ad Hoc reviewer
1998-present	Diabetes and its complications, Ad Hoc reviewer
1999-present	Journal of Neuroimaging, Reviewer
1999-present	Journal of Neurology, Ad Hoc reviewer
2000-present	Neurology, Ad Hoc reviewer
2003-present	Israeli Medical Association Journal (IMAJ), Reviewer
2003-present	Acta Neurologica Scandinavica, Ad Hoc reviewer
2006-present	Journal of Neurology, Neurosurgery & Psychiatry, Reviewer
2010-	European Neurology, Ad Hoc reviewer

MEMBERSHIP IN PROFESSIONAL SOCIETIES

1977-present	Israeli Medical Association
1983-present	The Israeli Neurological Association
1985-present	Stroke Council of the American Heart Association (Fellow)
1986-present	American Academy of Neurology
1986-present	Neurosonology Research Group of the World Federation of Neurology
1987-present	Stroke Research Group of the World Federation of Neurology
1990-2008	International Stroke Society
1995-2008	European Stroke Council
1995-present	Mediterranean Stroke Society (MSS)
1998-present	European Neurosonology Society
2005-present	World Stroke Organization (WSO)
2008-present	Fellow of the European Stroke organization (FESO)

ABSTRACTS

ACUTE STROKE THERAPY: CURRENT STATUS AND FUTURE DIRECTIONS

MARC FISHER
Professor of Neurology, Harvard Medical School
Emeritus Professor of Neurology, University of Massachusetts Medical School, USA

The field of acute stroke therapy has seen exciting advances recently. In 2015, five thrombectomy trials were published that clearly demonstrated the efficacy of this treatment in carefully selected patients in patients with proximal, large vessel occlusion when treated within 6-8 hours of stroke onset. The key features of these trials were the substantial rate of recanalization with the use of stent retrievers, the rapidity of the procedure in most cases and the inclusion of patients with a small/moderate sized ischemic core as measured by CT ASPECTS or CT perfusion. More recently, thrombectomy was shown to be highly effective in patients up to 24-hours after stroke onset in the DAWN and DEFUSE-3 trials. In both trials, advanced imaging with CT perfusion or diffusion MRI was used to select patients with small to medium sized ischemic cores. Similar selection criteria will need to be utilized in daily clinical practice to replicate the benefits of the early and later time window thrombectomy trials.

Going forward, many additional thrombectomy trials will be needed to evaluate patients not included in the initial trials, such as those with a more distal intracranial occlusion, lower baseline NIHSS score and larger ischemic core. Additionally, trials to evaluate neuroprotection combined with thrombectomy can be envisioned. Three types of combination trials can be anticipated. The first would be to use very early initiation of neuroprotection to slow down the evolution of the ischemic core while patients are being transferred from a smaller outlying hospital to a thrombectomy center or in patients who will have a long transport time from home to the thrombectomy center. The second type of neuroprotection trial with thrombectomy would be to directly or systemically infuse a drug targeting reperfusion injury after reperfusion has been established by thrombectomy. A third combination would be to use a drug or gas that enhances collateral blood flow prior to thrombectomy to favorably enhance collateral blood flow before thrombectomy to keep the ischemic core as small as possible.

CRYPTOGENIC STROKE

MARC FISHER
Professor of Neurology, Harvard Medical School
Emeritus Professor of Neurology, University of Massachusetts Medical School, USA

Cryptogenic stroke is defined as a stroke of uncertain source despite an adequate search for the potential cause. The percentage of ischemic strokes that are cryptogenic vary among case series but contemporary studies suggest that approximately 25-30% of ischemic strokes do not have a determined cause. A recently defined group of cryptogenic stroke patients is those who are likely to have a cardioembolic stroke and they have been called embolic stroke of undetermined source (ESUS). The evaluation of ischemic stroke patients should include an extensive array of tests such as brain and vascular imaging, blood tests, an echocardiogram and monitoring of the cardiac rhythm. Since many cryptogenic strokes are thought to fall into the ESUS category, a more extensive cardiac evaluation should be considered. This would include transesophageal echocardiography and prolonged ECG monitoring in selected patients. The risk for recurrence of cryptogenic stroke is similar to patients with a determined source for their stroke. Secondary prevention should include antiplatelet therapy and risk factor modification. For ESUS patients, it is tempting to consider anticoagulation but current recommendations do not support this approach. Several ongoing clinical trials are comparing direct oral anticoagulants to antiplatelet therapy and the results should be available in a few years.

TIME IS BRAIN, TIA AS AN EMERGENCY

NATAN BORNSTEIN

Director of Neurological Division, Sackler school of Medicine, Tel-Aviv University, Israel

Transient Ischemic Attack (TIA) should be considered as an emergency and work-up has to be done within 24 hours like acute unstable angina pectoris. It is known that about 23% of stroke are preceded by TIA.Several studies have shown that the risk of subsequent stroke in the first 2 weeks after a TIA is about 1% per day. In 2 published well conducted studies, EXPRESS (P. Rothwell) and SOS_TIA (P. Amarenco) it was shown that very early management in a TIA clinic will reduce the risk of subsequent stroke by 80% at 3 months. Therefore, work-up evaluation has to be performed with in 24 hours in a dedicated organized structure.

Several stroke registries reported that carotid stenosis is the cause of embolic stroke in about 25%-30% of all ischemic strokes. Current guidelines recommend immediate intervention either by carotid endarterectomy (CEA) or stenting (CAS) in patients with symptomatic carotid stenosis greater than 50%.
Carotid duplex is a reliable, non-invasive, accessible tool for evaluation of carotid stenosis with very high level of accuracy. Therefore, carotid duplex should be the first line tool for rapid evaluation of every patient with TIA in order to detect a potential treatable carotid stenosis for stroke prevention. It is recommended to establish an "Acute TIA clinic" equipped with immediate accessible Duplex device to enable rapid evaluation of the carotid system in order to detect potential treatable carotid stenosis.

MANAGEMENT OF SYMPTOMATIC CAROTID STENOSIS CEA VS. STENT

NATAN BORNSTEIN

Director of Neurological Division, Sackler school of Medicine, Tel-Aviv University, Israel

Symptomatic severe carotid stenosis (>70%) carries a high risk of subsequent stroke of about ~ 30% over 2 years. Carotid endarterectomy (CEA) was proved to reduce the risk of stroke significantly, with Relative Risk Reduction (RRR) = 65% and Number Needed to Treat (NNT) = 6 if performed safely (perioperative S&D =5.8%) and should be executed within 2 weeks of TIA or minor stroke (NASCET & ECST).

For carotid stenting to replace CEA we need to know the comparative safety, durability and efficacy of the procedure. Only a few randomized, controlled studies comparing CEA and stenting were conducted (CAVATAS, SAPPHIRE, EVA-3 and SPACE) with inconclusive results. There are still several ongoing studies (CREST in the USA and ICSS in Europe and Australia). Until more data will be available carotid stenting should be performed only in a selected group of patients with specific indications like: re-stenosis of the CEA, post neck radiation, inaccessible lesion for CEA and contra-indications for CEA.


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