

# WORLD NEUROLOGY

THE OFFICIAL NEWSLETTER OF THE WORLD FEDERATION OF NEUROLOGY



Faculty provide students with instructions for the written exam.

## EBN, EAN Hold Joint European Board Examination in Neurology

BY WOLFGANG GRISOLD, MD

The European Union of Medical Specialists (UEMS), as the European representation of medical specialists, encourages the use of a European board examination in neurology. The exam aims to test knowledge, problem-solving, presentation abilities, and handling knowledge and aspects of ethics and public health. These European board examinations are developing well and are replacing national examinations in several disciplines and countries. The European Board of Neurology (EBN) held its Eighth European Board Examination jointly with the European Academy of Neurology (EAN) in Copenhagen, Denmark.

The UEMS/EBN/EAN board exam in neurology took place May 27, 2016, at the EAN Congress. Seventy-two candidates from several European and non-European countries participated. The exam comprised multiple-choice questions (MCQs) in open- and closed-book fashion and was followed by a presentation of a short essay on

see EXAM, page 6

## Dakar Named Third WFN Teaching Center in Africa



The WFN delegation met with neurology faculty and residents during a site visit to Cheikh Anta Diop University in Dakar, Senegal. This is the third WFN Teaching Center in Africa.

BY WOLFGANG GRISOLD, MD, STEVEN L. LEWIS, MD, AND RIADH GOUIDER, MD

With the creation of several World Federation of Neurology (WFN) Teaching Centers, the WFN has increased the scope of its educational activities for training young neurologists worldwide.

In 2013, the University of Rabat, Morocco, was the first institution to be accredited, followed by the University of Cairo in 2015. Cheikh Anta Diop University, Dakar, Senegal, will be the third WFN training center in Africa. The rationale behind the application of Cheikh Anta Diop University is not only the need for an additional training center, but also the previous training experiences already accumulated by this institution. Outside of the African continent, the WFN also accredited training centers in Mexico in 2016.

The neurology department at Cheikh Anta Diop University applied and was visited according to WFN procedures by Wolfgang Grisold, MD, Vienna, Austria, WFN secretary general; Steven Lewis, MD, Chicago, Illinois, United States, co-

opted trustee and chair, WFN Education Committee; and Riadh Gouider, MD, La Manouba Tunisia, African Academy of Neurology and elected WFN trustee.

Prior to the visit, structured interviews were distributed to staff, teachers, and trainees. On site, the Visiting Committee interviewed randomly selected staff members and residents.

The neurology department at Cheikh Anta Diop University has a resident teaching structure depending on the year of training. The four-year training includes one year in a different facility. First-year neurology residents predominantly are involved in inpatient services, and, at the later stages, they are involved in all outpatient and additional services. Night duties are under supervision, and a faculty member always can be reached. Daily visits of all inpatients occur.

The department has a high number of educational events, including semiology, lectures, and case studies. Residents are encouraged to participate in meetings, give presentations, and participate in

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**FROM THE EDITORS**

BY STEVEN L. LEWIS, MD, EDITOR,  
AND WALTER STRUHAL, MD, CO-EDITOR

**W**e are pleased to introduce the September/October 2016 issue of *World Neurology*.

In this issue, Raad Shakir, MD, president of the World Federation of Neurology (WFN), provides us with his insights about the infrastructural investments, in addition to the training of more neurologists, required for providing optimal neurologic care worldwide.

Wolfgang Grisold, MD, and Steven L. Lewis, MD, report on the recent successful site visit to Dakar, Senegal, now becoming the third WFN Teaching Center on the African continent. Dr. Grisold then reports on two recent international educational activities, the Eighth Joint European Board Examination in Neurology in Copenhagen, as well as the 14th International Congress on Neuromuscular Disease in Toronto.

Jera Kruja, MD, reports on the activities from the Albanian Day of the

Brain celebration. John D. England, MD, provides his editor-in-chief's update from the *Journal of the Neurological Sciences*, the official journal of the WFN.

In this month's history column, Catherine E. Storey, MBBS, FRACP, MSc, provides an illustrated summary of the development of the ophthalmoscope and its introduction to British neurologists. Serefnur Öztürk, MD, announces an exciting international essay contest for young neurologists sponsored by the Turkish Neurological Society.

In the book review column, Carrie Grouse, MD, reviews a multiple-expert authored book devoted to discussing and contextualizing landmark neurological

papers. Vladimir Hachinski, MD, DSc, adds his heartfelt memories about the life of John N. Walton, MD.

Finally, Dr. Grisold provides a tribute to Keith Newton, who stepped down from his work at the WFN after 18 successful years as executive director and consultant administrator.

We sincerely hope you enjoy the contributions from this issue, and we look forward to seeing the delegates of the WFN at the upcoming Council of Delegates meeting

occurring Sept. 12, 2016, coincident with the 12th European Congress on Epileptology in Prague.

As always, we encourage your outstanding submissions and helpful suggestions for the benefit of all *World Neurology* readers around the globe. •



STEVEN L. LEWIS, MD



WALTER STRUHAL, MD

# Report of the ICNMD Congress



Toronto, Canada, was the backdrop for the 14th International Congress on Neuromuscular Disease in 2016.

BY WOLFGANG GRISOLD, MD

**T**he 14th International Congress on Neuromuscular Disease (ICNMD), which took place July 5-9, 2016, in Toronto, Canada, brought 750 delegates.

Vera Bril, MD, organized the Congress on behalf of the World Federation of Neurology (WFN) neuromuscular research group.

This ICNMD Congress covered the broad spectrum of neuromuscular diseases and aimed to fill the gap between new developments in research, in particular genetics and immunology, and patient assessment and care. The aim was to include the spectrum of neuromuscular diseases and focus on practical issues and emerging therapies.

The plenary session topics focused on new genetic avenues in muscle disease, new treatment strategies in neuromuscular disease, treatment of inflammatory neuropathies, therapy in muscle disease, motor neuron disease, advances in myasthenia, and late-breaking news on the neuromuscular complications of Zika infections.

The scientific sessions were preceded by a rich selection of teaching courses, also with a wide variety of topics, such as motor neuron diseases, neuropathies, neuromuscular transmission disorders, and muscle diseases.

In the afternoon, a choice of workshops allowed participants to discuss diseases and other issues in small groups in more detail. The poster sessions were a site of lively discussion, and many new projects and ideas appeared.

The meeting fulfilled several important tasks, such as:

- Giving a broad overview on the different types of neuromuscular disease
- Adding late news and scientific knowledge
- Having a wide educational and CME scope
- Being a site of discussion and networking where delegates felt welcome

For the next site of the ICNMD 2018, Vienna, Austria, was elected, with Wolfgang Grisold, MD, WFN secretary general, as the Congress president. Welcome to Vienna in 2018. •

## REVIEW THE 2016 ICNMD ABSTRACTS

View the abstracts of the 2016 International Congress on Neuromuscular Disease Congress, which were published in the *Journal of Neuromuscular Diseases* (Volume 3, Supplement 1, pages S3-215).



Prof. Vera Bril, Toronto, president of the ICNMD Congress.



Prof. John England, MD, chair of the WFN neuromuscular research group, (left) and Dr. Nascimento, Brazil, at the special lecture on Zika.

## FROM THE PRESIDENT

# Training More Neurologists: Is the Investment Enough?

For decades, the World Federation of Neurology (WFN) has endeavored to do its best to advise on training young neurologists in the developing world. As a matter of fact, one of its central functions is training to support quality neurology worldwide.

If we look dispassionately at the current situation, we find that indeed the number of neurologists per capita has globally increased. However, if we look at the provision of care and the value to patients, the



RAAD  
SHAKIR, MD

situation may not be as rosy. Neurologists cannot work in isolation. The provisions of facilities for investigations and support are, to say the least, essential. We always try to produce a false sensation of satisfaction when we look at figures, but studies on effectiveness of neurological care are hard to come by.

In the real world, we have to look critically at the existence of supporting services and then perhaps make a judgment. Let us start with the availability and reliability of laboratory services. In more developed parts of the world, clinicians request all kinds of simple and more complicated tests, whether they are blood tests or histological tests. Neurologists expect timely and reliable results. This is far from the reality in most of the developing world. The types of tests available are limited, and quality control is unknown. Even simple routine tests have to be treated with caution. Immunological and genetic testing for a host of neurological conditions is totally lacking, and neurologists still rely on "clinical" diagnoses and judgment in treating patients.

Let's look at some examples. If we start with neuromuscular diseases, the availability of the acetylcholine receptor antibody assay is a problem that leaves managing myasthenia gravis difficult. Although the clinical presentation and response to anticholinesterase inhibitors is sufficient in many, definitive diagnosis needs confirmation in others. If one continues on this theme and then proceeds to more complex treatment, in many parts of the world intravenous immunoglobulins are prohibitively expensive and, in some, plasma exchange



The acute stroke team at Oslo University Hospital, Norway. Photo: Espen Dietrichs, MD, PhD.

is an alternative. In others, neither are available and medical treatment with anticholinesterase inhibitors and steroids are the only options. Even with this, the constant uninterrupted supply of drugs is a major issue. If we again carry the issue further and remain on the same theme, the provision of investigations, including imaging and thymectomy, is a major undertaking. Moreover, myasthenics deteriorate and may urgently require ventilation. The availability of intensive care facilities with expertise in ventilator support is deficient for such patients who will die if not helped.

Another example is acute stroke management, which is the second most common cause of death across the world. We are all aware of the availability of hyperacute stroke units. Centers are springing up across the developed world with facilities for intravenous thrombolysis and more advanced centers with intra-arterial thrombectomy. Even in the more developed parts of the world, not all strokes are taken to a fully equipped center with interventional thrombectomy facilities. If we look at the issues involved, we have to start with the basics of public recognition of early symptoms of stroke, and the provision of urgent ambulance and paramedical service for response, so that we follow the principle of time saves brain. If affected patients are taken to a local hospital, the availability of expertise to acutely deal with the problem needs a huge investment not only in neurologists, but also as importantly in radiologists, radiographers, laboratory technicians, nurses, and neurosurgeons. Such a team

needs to operate in unison around the clock. Espen Dietrichs, MD, PhD, of Oslo University, states that the success of thrombolysis treatment in acute stroke depends on prompt response from the patient as well as from pre-hospital and in-hospital health workers. The photo above shows the acute stroke team at Oslo University Hospital in Norway.

A third common scenario is epilepsy; globally 50 million individuals are affected. The diagnosis is by and large clinical, and the availability of MRI and EEG are essential but not vital to start treatment. In spite of that, the International League Against Epilepsy and World Health Organization state that seven out of 10 of those affected do not receive treatment at all. This happens in countries with a reasonable number of neurologists, but most of them are concentrated in large cities, and service is limited. If we extend the scenario further, we know that anti-epileptic drugs work in about 70 percent of patients even when used correctly, and this leaves millions of nonresponders. The provision of surgery is a major undertaking, which requires facilities and specialists, such as neurophysiologists, radiologists, neuropsychologists, intensivists, and neurosurgeons in addition to epileptologists. It is no longer possible for a general neurologist to accurately deal with the intricacies of seizures and correctly evaluate the semiology of attacks on video telemetry. Such procedures are beyond the capacities of most centers across the world.

There has been an explosion of what is termed as disease-modifying treat-

## Keith Newton Steps Down From the WFN

After 18 years as executive director and consultant administrator, Keith Newton left the World Federation of Neurology (WFN) July 31, 2016. He was recruited to the WFN in 1998 by Dr. Frank Clifford Rose and Lord John Nicholas Walton, and has seen the organization grow and change enormously.



Keith Newton

Keith wishes WFN members to know that he feels privileged to have been part of the WFN and hopes he made a contribution to its important work. He thanks all those who have assisted him in the past, in particular Susan Bilger and Laura Druce for their hard work, dedication, and loyalty to the organization.

He wishes everyone the very best for the future and would always be delighted to see any friends who may be passing through Edinburgh, Scotland, where he and his family now live.

The WFN is indebted to Keith for his long and committed service, and wishes him the best for the future. •

Wolfgang Grisold, MD  
WFN Secretary General

ments for multiple sclerosis. The number of drugs available now is staggering, and the way they are advertised is, at times, bewildering. If one attends any neurology congress, the manufacturers of these drugs are the major sponsors. There is no doubt that since the introduction of interferons in the early 1990s with little convincing evidence for significant effect on morbidity, there has been a plethora of studies on many immune regulation modifiers in one way or another. There is a common denominator in all of them; they are not easy to use by the general neurologist as well as being prohibitively expensive. The efficacy of the recent drugs is better established when compared to the interferons, which are now being slowly abandoned. Again, we must look at the condition itself globally and try to determine how it is dealt with and managed. Multiple sclerosis can be diagnosed clinically when all the pieces of the jigsaw fall in place. However, it is not possible to make a diagnosis of a

# Albania Celebrates the Day of the Brain



Participants gather during World Brain Day.

BY JERA KRUJA, MD

The Albanian Chapter of World Federation of Neurology (WFN) has celebrated World Brain Day annually since 2014. In 2016, World Brain Day was dedicated to the brain and aging and had a special meaning looking at the population figures from Albanian INSTAT.

In 2001, the population of Albania was 3,060,173, and in 2015, the population decreased to 2,889,167. However, the rate of persons over 65 years of age increased from 232,339 in 2001 to 597,420 in 2015.

We organized a meeting with the participation of neurologists from Tirana's main public and private hospitals and outpatient clinics, delegates from the

department of family medicine, and the Alzheimer Disease Association. Also, an article was published in the medical online journal, Doctor33. With these modest activities, in perfect accord to the WFN activities, we aimed to increase the attention of the society and government to the aging of the population and the associated high risk of neurological morbidity and social problems. •

Jera Kruja, MD, is a professor of neurology and head of the neurology service at the University of Medicine, Tirana,

UHC Mother Teresa, Tirana, Albania, a member of the WFN Teaching Courses Committee, and a member of the European Academy of Neurology Scientific Committee.



Prof. Jera Kruja gives a presentation on WFN guidelines at World Brain Day in Tirana, Albania.

## Editor's Update and Selected Articles From the *Journal of the Neurological Sciences*

BY JOHN D. ENGLAND, MD

As with any journal, changes in the editorial staff are necessary from time to time. Two of our associate editors, Nicolas Bazan, MD, PhD, and Bruce Ovbiagele, MD, MSc, have stepped down. Both of them did an outstanding job in ensuring the continuing success of our journal. Dr. Bazan will continue as an Editorial Board



John D. England, MD

member, and he will continue his role as the director of the Neuroscience Center at Louisiana State University Health Sciences Center (LSUHSC) School of Medicine in New Orleans. He will remain as an indispensable resource for basic neuroscience. Dr. Ovbiagele is now the editor-in-chief of our sister publication, eNeurologicalSci (eNS), and is the new chair of the Program Committee for the International Stroke Conference. He also continues to serve as chair of the department of neurology at the Medical University of South Carolina.

I am delighted to welcome two outstanding individuals as our new associate editors. I am confident that both of them will do an outstanding job to improve our journal and enhance the review process.

Hamilton Farris, PhD, is the new associate editor for basic science. He is

associate professor of neuroscience, cell biology and anatomy, and otolaryngology at the LSUHSC School of Medicine in New Orleans, Louisiana. He has over 24 years of experience in the fields of neuroscience, bioacoustics, and animal behavior. He has active research projects examining the evolution, ecology, and neurophysiology of sensory processing. He is the director of the medical neuroscience course, the co-director of the neuroscience PhD program, and assistant dean of student affairs for the LSUHSC School of Medicine.

Salvador Cruz-Flores, MD, is the new associate editor for outcomes research and cerebrovascular disease. He is professor and chair of neurology at Texas Tech University in El Paso. He is an internationally renowned expert in cerebrovascular disease and critical care neurology. He also holds a degree in public health (epidemiology). He has been a leader on several guidelines on cerebrovascular disease and is chair of the LATAM initiative, which was launched under the auspices of the World Stroke Organization and the American Stroke Association. He helped organize the Declaration of Santiago (La Carta de Santiago), which comprises several Latin American stroke societies.

In our ongoing attempt to inform readers of important and interesting new developments in the journal, the editorial staff has selected two new free-access articles. Both of these deal with potential adverse effects of using recreational marijuana. Marijuana is the most frequently used illicit drug, and many individuals believe that it has few

adverse effects. In the United States, 25 states and the District of Columbia have laws legalizing marijuana in some form, and four states and the District of Columbia have legalized marijuana for recreational use. Most likely, this trend for legalization will spread. Such initiatives have contributed to the belief of many individuals that marijuana is a safe recreational medication. As such, all of us need to be reminded that there are potential serious adverse outcomes associated with marijuana use.

1) Kavelin Rumalla, Adithi Reddy, and Manoj Mittal investigated the relationship between marijuana use and hospitalization for acute ischemic stroke (AIS) by performing a retrospective cohort analysis of the U.S. Nationwide Inpatient Sample (NIS) from 2004 to 2011. The incidence of AIS hospitalization in marijuana users and non-marijuana users was compared. After adjustment for other confounders, they found that marijuana use was independently associated with a 17 percent increased likelihood of hospitalization for AIS. Not surprisingly, the likelihood of AIS hospitalization increased when marijuana use was combined with tobacco (31 percent) or cocaine (42 percent). The authors bring up the question of whether all patients with AIS should be queried regarding marijuana use. Recreational Marijuana Use and Acute Ischemic Stroke: A Population-Based Analysis of

Hospitalized Patients in the United States, *J. Neurol. Sci.* 364 (2016) 191-196. [http://www.jns-journal.com/article/S0022-510X\(16\)30066-1/fulltext](http://www.jns-journal.com/article/S0022-510X(16)30066-1/fulltext).

2) David Rose from the University of South Florida provides an editorial, which summarizes the above article and provides a more general perspective on recreational marijuana use and its potential adverse effects. He also adds enlightening commentary on the potential adverse effects of synthetic marijuana (eg, "Spice" or "K2"), which may be more dangerous than regular recreational marijuana. What a Downer: The Dark Side of Cannabis, *J. Neurol. Sci.* 364 (2016) 189-190. [http://www.jns-journal.com/article/S0022-510X\(16\)30147-2/fulltext](http://www.jns-journal.com/article/S0022-510X(16)30147-2/fulltext). •

John D. England, MD, is editor-in-chief of the *Journal of the Neurological Sciences*.



# Introducing the Ophthalmoscope to British Neurologists

BY CATHERINE E. STOREY, MBBS, FRACP, MSc

**H**ermann von Helmholtz (1821-1924), a German scientist, published the description of the first clinical ophthalmoscope in 1851. He called his invention the Augenspiegel or eye-mirror. Within a few years of his report, the ophthalmoscope became universally popular with eye specialists, many of whom attempted to make modifications and adaptations to improve the optics, illumination, and retinal image.

In Britain, one of the leading ophthalmologists of the day, Thomas Wharton Jones (1808-1891) briefly mentioned the Helmholtz ophthalmoscope in the second edition of his text, *The Principles and Practice of Ophthalmic Medicine and Surgery*, published in 1855. However, some 10 years later, in the third edition (1865), not only did he devote a chapter to the subject, with comprehensive illustrations to instruct on the use of the ophthalmoscope, but he hinted at the possibility of a British forerunner of the invention.

Jones explained that he was shown a model “contrived for looking into the interior of the eye” by Charles Babbage (1791-1871), the English mathematician: “Here I ought not to omit stating that in the spring of the year 1847, Mr. Babbage showed me the model of an instrument which he had contrived for looking into the interior of the eye. The reflector was a small, plain glass mirror, with a part of the silvering rubbed off to look through.”

However, he failed to see any benefit, told Babbage that it was worthless, and,

as a consequence, Babbage abandoned his prototype!

British ophthalmic surgeons embraced this new technology. A report from the Royal Ophthalmic Hospital published in *The Lancet* in 1855 described the contemporary position.

“It may appear at first to be a mere plaything, as did the stethoscope or microscope; but it is destined to play a very important part in the interpretation of eye cases before long. This very useful instrument continues to be more and more used and valued every year.”

If the British ophthalmologists were quick to employ the ophthalmoscope, how then was this device introduced to British (and Commonwealth) neurologists?

Three British neurologists promoted the value of the ophthalmoscope in clinical neurology:

#### Thomas Clifford Allbutt (1836-1925)

Thomas Clifford Allbutt (later Sir Thomas) was a well-known physician at the Leeds General Infirmary from 1861 to 1889. Although he published case reports on the value of the ophthalmoscope in medical practice from 1868, it was his text, *On the Use of the Ophthalmoscope in Diseases of the Nervous System and of the Kidneys; Also in Certain Other General Disorders*, published in 1871, that influenced other physicians, including William Richard Gowers. Allbutt commented in his 1868 text that “... the number of physicians, who are working with the ophthalmoscope in England may, I believe, be counted upon the fingers of one hand ... it would seem that the same reproach cannot attach to our Continental neighbours ...”

#### John Hughlings Jackson (1835-1911)

Jackson joined the staff of the Royal London Ophthalmic Hospital (Moorfields) as early as 1859 and to the National Hospital for the Paralyzed and Epileptic, Queen Square in 1862. Jackson later reported that he learned to use the ophthalmoscope at Moorfields in 1863 and from that time urged his readers to be aware of the benefits of the instrument. He frequently claimed that it was impossible to investigate neurological disorders without using the ophthalmoscope. He drew attention to cases of optic neuritis (as papill-

edema was then known) when florid signs could be seen even in the presence of preserved visual acuity. He was adamant that the ophthalmic examination should never be omitted with “severe and continued headache.” Although Jackson is well known for many different facets of neurological practice, between 1877 and 1889, he devoted many of his invited lectures to medical ophthalmoscopy.

#### William Richard Gowers (1845-1915)

Gowers (later Sir William) was appointed to the National Hospital for the Paralyzed and Epileptic, Queen Square in 1870, and a contemporary of Jackson. He too published numerous individual case reports in which the use of the ophthalmoscope was paramount. Although best known for his *Manuals*, published in 1886 and 1888, Gowers’ text on medical ophthalmoscopy, *A Manual and Atlas of Medical Ophthalmoscopy* published in 1879, was perhaps equally influential in its time. Gowers, with his superb clinical acumen and extraordinary artistic ability, delivered a valuable resource for neurologists and other physicians, and in doing so promoted the incorporation of the ophthalmoscope into a routine neurological examination.

#### Commonly Used Ophthalmoscopes

Andrew Stanford Morton (1848-1927), an ophthalmologist at University College, London, and Moorfields Eye Hospital, published a small pamphlet in 1884 in which he introduced his new “improved student’s ophthalmoscope.” Although his device still relied on an external source of illumination, this small compact model now incorporated a series of 29 separate lenses propelled by a driving wheel. This mechanism provided a much improved acuity and ease of use. The Morton ophthalmoscope became one of the most popular models for the next 40 years.

Charles May (1861-1943), an ophthalmologist working in New York, is best known for the *Manual of Diseases of the Eye*, published in 1900. The book became a classic text and atlas of ophthalmology, going through 23 editions between 1900 and 1963. The May ophthalmoscope, with an internal illumination source, similarly went through many editions and proved



Clockwise from left: May's ophthalmoscope (1935), Heine's ophthalmoscope (1995), and Morton's ophthalmoscope (1910).

to be popular in routine practice. •

Catherine E. Storey, MBBS, FRACP, MSc, is a clinical associate professor at the University of Sydney School of Medicine, Australia.

Peter J. Koehler, MD, PhD, FAAN, is the editor of this history column. He is neurologist at Zuyderland Medical Centre, Heerlen, the Netherlands. Visit his website at [www.neurohistory.nl](http://www.neurohistory.nl).

## PRESIDENT

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“clinically isolated syndrome” as an example without the availability of imaging and laboratory support. The reliability of the cerebrospinal fluid oligoclonal bands test is beyond the vast majority of laboratories across the world, let alone the test for aquaporin 4 antibodies. When reviews are produced in neurological journals, the latest advances are correctly mentioned as a matter of fact without consideration of what to do without them. In the developed part of the world, MS-ologists as well as MS specialist nurses have sprung up, and they deal with the intricacies and the major side effect profiles of these medications.

Looking at all of this and innumerable other examples, one cannot escape the fact that much of the world is split between the haves and the have nots. The latter is by far the majority, and international organizations like the WFN have to represent all. The major issue is that governments are difficult to convince about the need for teams of trained neurologists, neurophysiologists, neuroradiologists, neurointensivists, nurses, and technicians. The investment in a world-class neurological service is massive, and we need to continue to push toward that. •



From top: Morton's ophthalmoscope (1910), May's ophthalmoscope (1935), and Heine's ophthalmoscope (1995).

## EXAM

continued from page 1

a neurology, public health, or ethics topic and a critical appraisal of a neurological topic (CAT). The language of the examination was English.

Although the largest part of the examination was the MCQs (80 percent), the oral interviews for the short essays and CAT allowed more personal contact with the candidates.

## The examiners took great care to listen, evaluate, and appraise the short essays and critical appraisals.

The examiners took great care to listen, evaluate, and appraise the short essays and critical appraisals (right). These exam items were prepared in advance, and interesting topics relating to current problems, therapies, and procedures in neurology were discussed. Teaching materials, such as ebrain, EFNS/EAN guidelines, and textbooks were suggested for preparation.

The examiners and faculty were involved in the prior preparation of the presentations. As they were from many regions of Europe and North Africa,

several authentic languages were represented, to help in addressing communication issues during the presentation.

The number of participants is steadily increasing, and also the number of non-European candidates is rising, which makes the UEMS/EAN board examination an attractive examination.

The next UEMS/EAN board examination will be in June 2017 during the EAN meeting in Amsterdam. The date is not fixed, but visit the [UEMS/EBN website](#) for technical details and announcements.

The WFN was invited to observe, and, as WFN secretary general, I took the opportunity to observe and make this report.

### Some of the CAT Topics (Examples)

- NMDA Receptor Antibodies in CSF and Serum
- rTMS for Refractory Focal Epilepsy
- Cervical Trauma and MS
- Rituximab for Optic Neuritis
- Tetrabenazine for the Treatment of Chorea
- Sphenopalatine Ganglion in Cluster Headache
- Antiviral Therapy for GBS

### Some of the Essay Topics (Examples)

- Prolonged Ventilation in ALS
- Malnutrition in India
- Treatment Inequalities for MS in Europe
- Vaccination Against Meningitis During Hajj in Saudi Arabia
- Taking Presents From industry
- Epilepsy and Driving
- Dealing With Medical Errors
- A Care Driver With Epilepsy Forbidding You to Make Known His Diagnosis •



The board examination in neurology faculty gather for the UEMS/EBN/EAN board exam.



The successful candidates and faculty join together for a final photo after the examination.

# Neurology in 2050: Are You the Next Jules Verne?

## THE TURKISH NEUROLOGICAL SOCIETY CALLS FOR MEDICAL STUDENT ESSAY SUBMISSIONS

BY SEREFNUR ÖZTÜRK, MD

Our century has become the Brain Century, and it is important to keep improving on this trend.

The Turkish Neurological Society has established an international essay competition for medical students to increase awareness about improvements in neurology in the Brain Century.

Medical education has various aspects, and creativity is one of the essential skills in medical education.



Serefnur Öztürk, MD

An essay may improve oneself in various ways, including free learning, data collection, assessment of current information, improved decision-making, writing, planning, communication, and sharing.

We believe we have highly talented young physicians who have the potential to become the Jules Vernes of today. We invite you to participate in our essay contest and to contribute to the future of neurology.

The subject of the contest is Neurology in Year 2050. The purpose is to raise awareness among medical students in order to attract attention to the vision of neurology in their curriculum, to raise awareness about neurology and neurological disorders in the public through the eyes of medical students, and to encourage students to study neurology as a specialty.

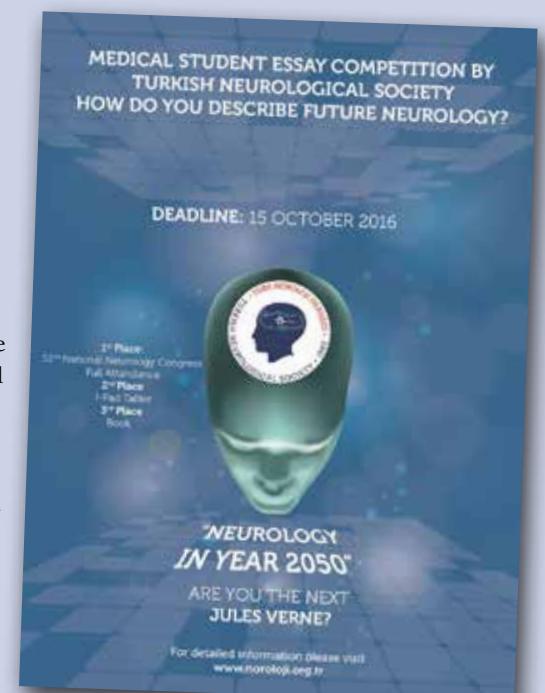
Our target contestants are medical

students in Turkey and other countries (all World Federation of Neurology member countries).

To submit an application and access the rules, visit the [World Federation of Neurology essay contest website](#) or the [Turkish Neurological Society essay contest website](#).

The application period is June 15 to Oct. 15, 2016. Winners will be announced Nov. 15, 2016. We look forward to receiving your creative essays. Good luck. •

Serefnur Öztürk, MD, is president of Turkish Neurological Society, on the faculty of the department of neurology at Selcuk University, Konya, Turkey, and on staff at the Turkish Neurological Society.



BOOK REVIEW

# Landmark Papers in Neurology

BY CARRIE GROUSE, MD

In reading *Landmark Papers in Neurology*, the famous quote by Sir Isaac Newton, “If I have seen further, it is by standing on the shoulders of giants” comes to mind as an appropriate aphorism. The sheer scale of progress made in our understanding of neurologic pathophysiology and treatment over the last few centuries, through advancements in the fields of anatomy, molecular biology, genetics, and neuroimaging, is made evident throughout this collection. Moreover, in this book, we are shown the indefatigable efforts of the scientists

and clinicians, who, by a combination of tireless effort, excellent scientific method, and at times pure serendipity, managed to make these discoveries.



Carrie Grouse, MD

Divided into 16 sections encompassing many major areas of neuroscience, the contributor or contributors for each section selected 10 important papers in each field that were particularly crucial in transforming and advancing understanding and making possible further breakthroughs. The articles themselves are not included in the volume; rather they are succinctly summarized, with the bulk of attention being paid to the scientific, social, and, at times, political context in which these papers arose, as well as the impact the

papers had on their respective fields.

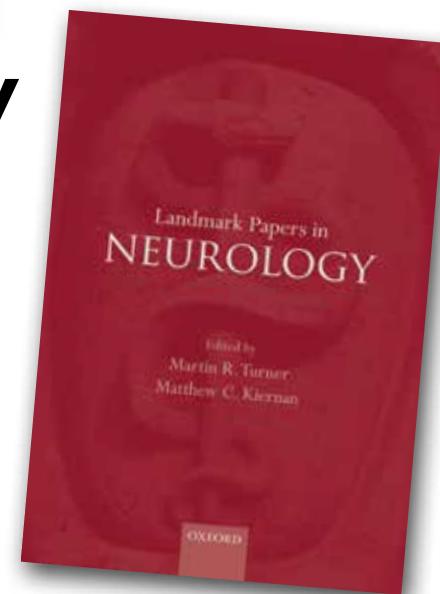
Although it is generally understood that all medical specialties constantly are growing and evolving with new scientific and technological advancements, this collection shows just how dramatically neurologic paradigms have been transformed completely through these landmark discoveries. Given the wide breadth of immunomodulatory therapies for multiple sclerosis, it is surprising to think that the first articles investigating the possibility of the use of interferon therapy in multiple sclerosis was only in the early 1980s, and treatment with interferons was only approved in the early 1990s. It seems equally surprising that in such a prevalent disease as epilepsy, so little was known about its cause until the first article describing electroencephalography in 1929, particularly given the dramatic advancements in the field of epilepsy since then.

It was fascinating to follow the progression of knowledge in the area of Parkinson’s disease, from a humble treatise written by a relatively obscure apothecary about the “shaking palsy,” to the discovery of L-dopa as a revolutionary treatment, and more recently to the development of deep brain stimulation. Equally captivating was the recounting by Peter Goadsby, MBBS, of the circuitous path that was taken toward understanding the mechanisms behind migraine, and the substantial setback to the field that was caused by the “vascular dogma” proposed in 1938, which took 50 years to fully reverse.

Some of the most compelling aspects of this collection are the details included

about the social, political, and even personal backdrops in which these discoveries were made. The seminal work performed by Alan Hodgkin and Andrew Huxley in elucidating the molecular basis of neurotransmission through their experiments on giant squid axons was almost abandoned, first due to being forced to work on radar development in World War II, then due to lack of ability to successfully catch squid for their experiments. The first description of an epileptic syndrome, West Syndrome, was in a letter to the editor of *The Lancet* by Dr. William James West, regarding a syndrome of unusual flexor spasms along with developmental regression that he noted in his own son. I was surprised to learn that Dr. Mary Walker, a female house physician at St. Alfege’s Hospital in London, was the first physician to treat a myasthenic patient with a cholinesterase inhibitor (physostigmine) after hearing that myasthenia gravis resembled curare poisoning, which had been found to be reversed with this agent. The political maneuvering and sabotage between competing scientists, hospitals, and laboratories, and the dramatic effect this had on what was published and how quickly new ideas were embraced, was also touched on throughout this collection, and made for fascinating reading. I often found myself regretting that each article was only afforded a few pages, such that these anecdotes were cut short.

Although a relatively minor issue, it seemed that the format of 10 articles per section was a little too strictly adhered to; some topics, such as neuroimmunol-



ogy or mitochondrial diseases, could have been well covered if limited to only a few of the more seminal articles, whereas in the fields of stroke and dementia it seemed that 10 articles was impossibly limiting. Overall, however, the contributors and editors did a marvelous job with the daunting task of distilling a rich body of literature spanning multiple centuries. This book is well worth the read, as an excellent and inspiring review of the huge strides that have been made in the field of neurology in the last few centuries. It is intriguing to think of how much farther we will see in the future, thanks to the continued hard work, ingenuity, and serendipity of clinicians and scientists yet to come. •

Carrie Grouse, MD, is an assistant professor of neurological sciences at Rush University Medical Center, Chicago, Illinois.

## DAKAR

continued from page 1

scientific projects. Internet is available to them.

In terms of subspecialties, a one-year diploma of epilepsy can be pursued, and an additional diploma on neuromuscular diseases is being developed.

The visit to the department was carried out according to a predetermined checklist, which called for visiting inpatient departments. Visits to patient rooms also was granted. The team inspected several laboratories, including ultrasound, electrophysiology, and clinical laboratories. Other departments, including radiology, neurosurgery, pathology, and rehabilitation guarantee that multidisciplinary involvement will be achieved.

Compared with other public hospitals seen during the visit to Dakar, the neurology department

looked structured, and the interior seemed well organized.

The impressions of the site visitors were positive and confirmed a well functioning and busy department, devoted to patient care, training, and education. The staff comprises highly motivated colleagues who are keenly interested in teaching neurology and increasing the high level of patient care. The WFN is pleased to name the Cheikh Anta Diop University Dakar as the third WFN Teaching Center in Africa. •



Dr. Riadh Gouider gives a lecture to faculty and residents.



Dr. Gallo Diop makes a presentation for neurology residents.



Dr. Mansour Ndiaye (center), head of neurology, meets with Drs. Wolfgang Grisold (left) and Steven L. Lewis.



Faculty and residents from Cheikh Anta Diop University observe a lecture.

# John N. Walton: Fond Memories

BY VLADIMIR HACHINSKI, MD, DSC

My first knowledge of John N. Walton, MD, came from his reprint requests. My first papers were published as a resident (trainee in neurology). I was flattered that whatever I published was followed by a request from Professor Walton for a reprint. The requests were typed on half-page airmail envelopes and stated how much he appreciated the paper and asking for a reprint. He signed the requests individually, and I always obliged, although sometimes I would send him photocopies, since I could not afford reprints.

My next interaction related to a letter I wrote with other young stroke neurologists suggesting that the Cerebrovascular Research Group of the World Federation of Neurology (WFN) should allow for some renewal and not simply be run by the same people on the same themes with the same approaches. An appreciative and polite acknowledging letter came promptly, but action came much more slowly, due to the resistance of the Cerebrovascular Research Group leadership. In fact, it was not until my own presidency from 2009 to 2013 that we finally dissolved the lingering group in favor of the World Stroke Organization being the vascular arm of the World Brain Alliance, which we founded.

After years of honoring his reprint requests, I finally met Dr. Walton and his wonderful wife, Betty, in Uruguay. A personal relationship bloomed quickly to the point that he asked me for advice. He sought my opinion about what else needed to be done in world neurology. I produced a long list. Then he asked whether we were on the right track under his presidency. I responded "absolutely"

without prior thought or hesitation. He then said he had a problem. He said he thought he needed another four years as president to push forward the WFN agenda, but Betty did not wish for him to have a second term. He said if I did not mind telling her what I told him, she could change her mind. I do not know whether anything that I said had any influence on Betty; the fact is Dr. Walton was renewed as president for another four milestone years.

I looked forward to meeting the Waltons at congresses, which they

**Dr. Walton remarked that when he started his career most boys with Duchenne's dystrophy died in their teens, and now they were able to live far into their 30s with a good quality of life.**

attended with admirable dedication and grace. At one of the congresses, Dr. Walton said, "You gave me advice when I needed it. If I may, I would like to give you some advice, although you may not need it." I was eager to hear the advice, but was flabbergasted when he outlined the steps that I would have to take to become president of the WFN. I am not sure if I thanked him enough at the time, because the idea of becoming president of the WFN had never crossed my mind, but I had reason to be grateful for his words when I ran for office later in my career.

Twice, when I was chair of our department of clinical neurological sciences of the University of Western Ontario in London, Canada, I had the pleasure of inviting Dr. Walton as a visiting professor and co-hosting him along with his lifelong friend H.J.M. Barnett (Barney). Both were born in the same year (1922), in the same country (United Kingdom), and the same area: Dr. Barnett in Newcastle-Upon-Tyne, and Dr. Walton nearby. Both rose to the top, not only in their areas of expertise: Dr. Walton in neuromuscular and Dr. Barnett in stroke, but of neurology

itself. Dr. Walton became president of the WFN and much else, and Dr. Barnett became president of the International Stroke Society and a number of other organizations. Their careers are reminiscent of Plutarch's "Parallel Lives" wherein he compared a Greek and a Roman. I characterized Dr. Barnett as the "robust Roman" and Dr. Walton as the "sophisticated Greek."

Their careers were united in recognition at the 15th World Congress of Neurology in Vancouver, Canada (1993), when Dr. Barnett was the honorary president of the Congress and Dr. Walton was president of the WFN.

As the late Frank Clifford-Rose wrote about Dr. Walton in his biography in 1992, "that there were few doctors who were legends, and very few were legends in their lifetime,"<sup>2</sup> however one seldom has the opportunity to learn about the personal dimensions of a legend.

I had such a privilege. At the 2009 World Congress of Neurology in

## MARK YOUR CALENDAR

### 6th International Conference on Transcranial Brain Stimulation 2016

Sept. 7-10, 2016

Göttingen, Germany

[www.tbs-conference.de](http://www.tbs-conference.de)

### 12th European Congress on Epileptology (ECE)

Sept. 11-15, 2016

Prague, Czech Republic

[www.epilepsyprague2016.org](http://www.epilepsyprague2016.org)

### 5th European Headache and Migraine Trust International Congress (EHMTIC 2016)

Sept. 15-18, 2016

Glasgow, UK

[www.ehmtic2016.com](http://www.ehmtic2016.com)

### XIV Congreso Panamericano De Neurología 2016

Oct. 30-Nov. 3, 2016

Cancun, Mexico

[www.wfneurology.org/xiv-congresso-panamericano-de-neurologia-2016](http://www.wfneurology.org/xiv-congresso-panamericano-de-neurologia-2016)

### 3rd Kuwait North American Neurology Conference

Dec. 9-11, 2016

Safat Kuwait City, Kuwait

[www.kuwaitneurology.com](http://www.kuwaitneurology.com)

Bangkok, the venue of the Congress and the hotels were far apart. I sat next to Dr. Walton in a van taking us from the venue through the nightmarish Bangkok traffic, providing ample time to talk. He remarked that when he started his career most boys with Duchenne's dystrophy died in their teens, and now they were able to live far into their 30s with a good quality of life. He said this with such quiet compassion that I fell silent.

Nothing reveals more about a person's character than how people face death. Dr. Walton knew that his glioblastoma was incurable. In response to the overwhelming outpouring of sympathy from those who knew him, he wrote an eloquent, gracious acknowledgement and stated that regretfully he would have to give up most of his commitments, but he would continue with fundraising for his charities and the presidency of the Bamburgh Castle Golf Club.

Even in his last days, his thoughts were about what he could do for others. He lived the golden rule. Dr. Walton was not only a legend, but he was a good man. •

Vladimir Hachinski, MD, DSc, is a professor of neurology and epidemiology, at the University of Western Ontario, London, Canada.

#### References

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2. Aarli JA, Shakir R. In Memoriam. *World Neurology Newsletter*. July 2016. Vol 41; No. 4:3



Front row, left to right: Charles G. Drake, John N. Walton, Vladimir Hachinski, John P. Girvin, and Henry J.M. Barnett, with members of the department of clinical neurological sciences at the University of Western Ontario in London, Canada.

# Report From Recent Junior Traveling Fellowship Awardees

BY WALTER STRUHAL, MD, STEVEN L. LEWIS, MD, AND WOLFGANG GRISOLD, MD

The World Federation of Neurology (WFN) Junior Traveling Fellowships are awarded to gifted young neurologists to support attendance and scientific contributions at international meetings. This support is limited to lower income countries. The WFN is pleased to announce that 30 Junior Traveling Fellowships were awarded in 2016. A complete list of awardees is published online. The following are reports that have already come in from recent awardees of the 2016 WFN Junior Traveling Fellowships.

## Vikas Dhiman

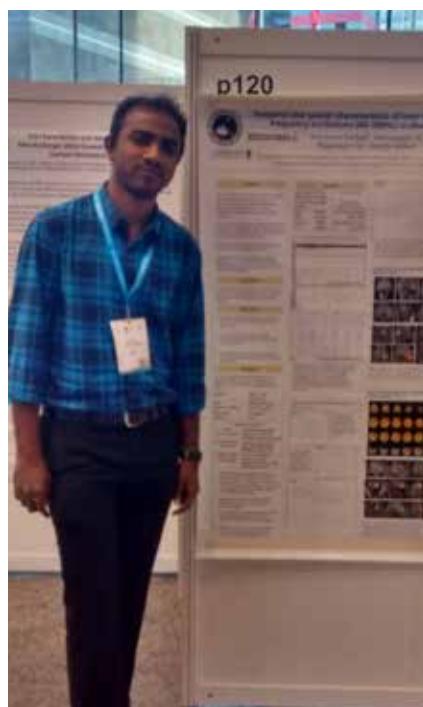
"I presented a poster on "The Role of Adenosine in Drug-Resistant Epilepsy Due to Hippocampal Sclerosis" at the Congress. This scientific gathering was a feat of knowledge. There were more than 40 platform and over 300 poster presentations. There were sessions ranging from didactic lectures to debates to practical workshops by the stalwarts in the field of epilepsy. Talks on some of the interesting topics, such as ketogenic diet in epilepsy, stereo-EEG, and brain networks, were the highlight of the Congress. This Congress gave me the opportunity to present my doctoral work at an international level. I had a productive interaction with eminent scientists and fellow clinicians in the Congress. The talks on genetics of epilepsy and brain somatic mutations were useful for me. Attending this Congress gave me new ideas, which I will pursue for my future research projects. This Congress helped me grow professionally and personally, and I want to thank the WFN once again for giving me the opportunity to attend."



Dr. Vikas Dhiman, India, presents his poster at the 11th Asian-Oceanian Epilepsy Congress in May in Hong Kong.

## Velmurugan Jayabal

"I attended and presented my poster at the Congress. I had valuable feedback for my research from the pioneers of the field, Prof. Akio Ikeda, Prof. Premysl Jeruska, and Prof. Herman Stefan. I also gave my EEG certification examination during this course. I learned a lot from the basic research and cognitive aspects of patients with epilepsy."



Dr. Velmurugan Jayabal, India, presents his poster at the 11th Asian-Oceanian Epilepsy Congress in May in Hong Kong.

## Bassam M. Abdulzahra Al-Fatly

"This course is a dream for any clinical neurophysiologist to meet the pioneers who introduced many of the well-known techniques to this diagnostic field. For five days, we attended theoretical lectures on every topic of neurophysiology of the peripheral nervous system starting early in the morning, followed by practical demonstrations and hands-on in the afternoon. The course was interactive between the faculty and participants. Paramount information was delivered to us on the single-fiber EMG technique from the founder Prof. Erik Stalberg. The faculty opened the door for any questions, and they took the time to answer a lot of difficult cases. Most of the participants presented patient cases. I felt privileged to be one of those who presented a case, which was on the neurophysiological diagnosis of hereditary neuropathy (Charcot Marie Tooth type I). I received a rewarding response from the faculty as well as the participant colleagues, in addition to excellent remarks on the way I presented electrophysiology results at my home institution. Among other activities, we enjoyed the social and warm welcome, which was provided by the department of neurophysiology in Uppsala University. In the end, I was honored to be among the winners of a WFN Junior Traveling Fellowship for 2016."



Dr. Bassam M. Abdulzahra Al-Fatly, Iraq, (seated) trains in electrophysiology at the Training Course in EMG and Neurography in May in Uppsala, Sweden.

The WFN Junior Traveling Fellowship program is meant to advocate young neurologists' work, providing a chance to present their work and network at an international level.

Supporting the next generation of neurologists worldwide is a major objective of the WFN. The overwhelming positive response to this program from

trainees and young neurologist colleagues is a strong sign of success of this important long-standing and continuing initiative.

The WFN encourages young neurologists to apply to this program in the future, and also to keep up the excellent spirit of reporting their experiences. •

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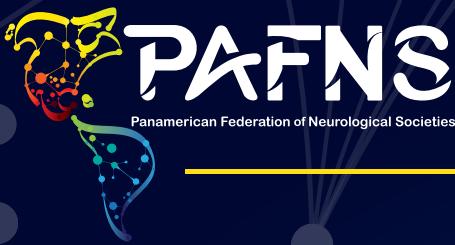
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Refer to our website [www.pactrims.org](http://www.pactrims.org) for updates.



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