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WORLD NEUROLOGY

THE OFFICIAL NEWSLETTER OF THE WORLD FEDERATION OF NEUROLOGY

Healthy Lifestyle and Prevention of Stroke

The wonderful city of Dubrovnik was the host of the 24th Summer Stroke School with international participation June 3-8. The summer school was held under the auspices of the Croatian Academy of Sciences and Arts. The usual and proud auspicates were Inter-University Centre Dubrovnik, Croatian Stroke Society, Medical School University of Zagreb, Central and Eastern European Stroke Society and Applied Research Group on Delivery of Neurological Services (RGODNS) of World Federation of Neurology (WFN).

Course Director Vida Demarin, fellow of Croatian Academy of Arts and Sciences (Zagreb, Croatia), Professor Roman Haberl (Munich, Germany), Professor Kurt Niederkorn (Graz, Austria), Professor Tatjana Rundek (Miami, USA) and Professor Zlatko Trkanjec (Zagreb, Croatia) have once again shown that Croatia is one of Europe's centers of knowledge. The course gathered many experts from around the world who unselfishlessly shared their clinical and personal experience and knowledge with course participants.

The aim of the course once again supported the cooperation and promoted the exchange of knowledge and experience among participants from different countries. This meeting shed a new light on epidemiology of stroke, its primary and secondary prevention, diagnostics, therapy and rehabilitation. All participants had a unique opportunity to share their national stroke data and discuss specific stroke problems of their country. Countries of East and West Europe had an opportunity to work together on solving problems related to stroke, whether they were medical, economical or of some other nature.

The diverse scientific program embraced different aspects of stroke, from the importance of spreading knowledge about stroke, stroke prevention in 2013, prevention of stroke in atrial fibrillation, a new era, IMT / plaque, the same or different phenotypes, recent advances in ultrasound diagnosis, dissection of carotid and vertebral arteries as a cause of stroke, aortich atheroma as a risk factor for stroke, sensory impairments after stroke, silent brain infraction, thrombectomy in acute stroke, gender differences in stroke, detection of cerebral emboli using transcranial doppler, vascular mild cognitive impairment, gut — your second brain, diagnosis and treatment of vertebral artery stenosis, examination after stroke, postpartum stroke, advanced glycation end products (AGE) and their role in carotid atherogenesis, and many more interesting topics.

All of the hard work was awarded by a rich social and cultural program: an excursion to the island of Lokrum, a violin recital by Midori Komachi organized by Uta Schneider in honor of Professor Vida Demarin in Rectors Palace in the heart of Dubrovnik, and the closing night of this Summer Stroke School that offered flavors and tastes of traditional Mediterranean tasty and healthy foods in the peaceful atmosphere of Dubrovniks's peninsula Babin Kuk. Altogether, it was a worthwhile and interesting scientific and social program and once more a successful Summer Stroke School. We look forward to the 25th Summer Stroke School June 9-13, 2014. •

INSIDE

NCL Research Award

Medical and basic science researchers worldwide are invited to submit innovative clinical or translational basic science projects to contribute to finding a cure for juvenile Neuronal Ceroid Lipofuscinosis (NCL), also called Batten disease. Scientists from related areas of science including Alzheimer's disease, aging and other lysosomal storage disorders are particularly encouraged to apply for the NCL Research Award. Applications are due by email by Oct. 31, 2013, to **research@ncl-foundation.com**. Applicants must use the provided application form, available at **www.ncl-stiftung.de/englisch/media/dokumente/promotion/ncl_research_award/ncl_application_form_2013.docx**.

More information is available at **www.ncl-foundation.com**. •

Richard Bright Advanced Research on Apoplexy, Stroke

BY HENRY S. SCHUTTA, MD

Richard Bright was born in 1789 in Bristol. He received his medical training at the University of Edinburgh and at Guys Hospital, which he completed in 1812 with a doctorate on infectious erysipelas. (Berry and Mackenzie).

In 1820, Bright was elected assistant physician to Guy's Hospital. There, he spent time in the company of a number of physicians whose names like his own became household names in medicine — James Parkinson, Thomas Addison and Thomas Hodgkin.

The eminent surgeon and scholar Sir Astley Cooper encouraged Bright in his research activities and impressed upon him the value of autopsies. After the publication of his epochal studies on diseases of the kidney in 1827, Bright recorded his observations on diseases of the brain. Volume II of his "Reports of Medical Cases" (Bright 1831) contains a wide range of neurological disorders.

The portrait of Bright that accompanies many of his biographical sketches shows him as a somewhat perplexed grandfather. It is likely however, that during his productive period, he resembled more a marble bust of him, which suggests a bright, alert and inquisitive young man. (See Figure 1.)

Bright made seminal observations on diseases of many organs, but it was his work on diseases of the kidneys that earned him undying fame and the title of "The Father of Nephrology." This monumental accomplishment has overshadowed his important observations on diseases of the brain and other organs.

Apoplexy

Advances in anatomy and physiology initiated in the 16th and 17th centuries and

see **BRIGHT**, *page 14*

Figure 1. Marble bust depicting a young Richard Bright (from Barry and Mackenzie 1998).

FROM THE EDITOR-IN-CHIEF

Welcome to Editorial Advisory Board, Assistant Online Editor

I am pleased to present the members of the Editorial Advisory Board. These individuals will help guide the continued development of *World Neurology Online*. Each of these distinguished neurologists has agreed to provide and solicit announcements and articles of interest from their regions and beyond.

DONALD H. SILBERBERG

I also am pleased to announce that Keith Newton, the World Federation of Neurology's executive director, has agreed to serve as assistant editor of *World Neurology Online*. Please send your announcements, reports and articles to me **silberbe@mail.med.upenn.edu** and/or to Keith Newton **keith@wfneurology.org**.

As you prepare for what promises to be an exciting and informative World Congress in Vienna, keep in mind that two democratic processes will take place during the meeting.

As you prepare for what promises to be an exciting and informative World Congress in Vienna, keep in mind that two democratic processes will take place during the meeting.

Keith Newton

The first is the selection of new officers for the WFN; the second is the choice of country for the 2017 World Congress. The WFN Council of Delegates votes both selections. If you wish to share your thoughts with your national delegate, and might not be sure who that is, you can obtain his or her name and email address from Keith Newton.

I look forward to seeing and meeting many of you in Vienna. •

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Keith Newton, Executive Director of the World Federation of Neurology, Assistant Editor, *World Neurology*

IN MEMORIAM

Kayshibaev Nurlan Smagulovich

Professor Kayshibaev Nurlan Smagulovich passed at the age of 51 on June 17, 2013. Smagulovich was a famous neurologist of Kazakhstan. After graduating from medical school in 1984, he moved his way up from doctor-intern to the head of the Institute of Neurology.

During his career, he also headed the departments of neurology of Almaty city clinics, was the director of a health center in South Kazakhstan region, was a leading neurologist of Health Care Ministry of Republic of Kazakhstan, and was a leading neurologist of Almaty Department of Health Care Ministry.

He founded and headed the Institute of Neurology and the League of Neurologists of Kazakhstan, the member society of WFN (World Federation of Neurology).

He was a head of the Department of Neurology of the Almaty State Institute of Advanced Training of Physicians and a member of the Association of Neurologists of Kazakhstan.

He trained medical students and doctors from all over the country. His teaching career included work at the South Kazakhstan State Medical Academy, Kazakh National Medical University, Almaty State Institute of Advanced Training of Physicians and the Institute of Neurology.

He was particularly interested in cerebrovascular diseases, neurorehabilitation, degenerative and demyelinating diseases of nervous system, and diseases of the peripheral nervous system. One special area of focus was transient ischemic attacks (TIA), to which his master's and

see **SMAGULOVICH**, *page 6*

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WORLD NEUROLOGY

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FROM THE PRESIDENT

The Past and the Present: Parents of the Future

When Johan Aarli, my predecessor as president of the World Federation of Neurology (WFN), first mentioned that he was writing a history of the WFN, I realized that this was an important task. However, I did not expect that institutional history would be very exciting.

VLADIMIR HACHINSKI

As Aarli began sharing the chapters that he was writing, I happily realized that I was totally wrong. It is a fascinating book that has gained from the author's strategy of creating a context by describing what was occurring in the world, then what was happening in the world of the brain sciences and practice and then addressing the specific story of the WFN at different times.

One of his interesting findings is the crucially important role that the National Institute of Health played in the launching of the WFN. The book describes colorful personalities, crises and both generic and specific issues. One could easily conclude at times "same plot, different players."

The past WFN president gives a lively account of the history of the WFN up to the end of his tenure. I offer a provisional account of the present of the WFN in the accompanying reprinted article that I wrote at the request of the Editor of the *Canadian Journal of Neurological Sciences*, Bryan Young. The future of the WFN will be determined in Vienna, where a new president, a new vice president, a new secretary-general and one new trustee will be elected. There are multiple candidates for all of the roles, reflecting a healthy interest of individuals in leadership positions for the WFN. Whether the new officers will build on the leadership role that the WFN has achieved with the major world brain organizations during this administration, or revert to a more traditional and limited role will be conditioned by the WFN's past and present.

In addition to crucial elections, the World Neurology Congress in Vienna promises to be exceptional. The scientific program and teaching courses are of the highest quality, and the congress will be enhanced by the presence of another author: Eric Kandel, the Nobel Prize winner, will speak about the highlights of his recent book "The Age of Insight." Johan Aarli's book on the history of the WFN, titled "The WFN: The First Half Century" will not yet be available, but can be ordered at the congress.

Vienna has its own attractions beyond that of the congress, and we expect a record number of attendees.

Looking forward to seeing you in Vienna! •

SEE ALSO

See also Vladimir Hachinski's article, "World Federation of Neurology: Moving into the Future," *Can J Neurol Sci.* 2013; 40: 609-611.

The Forced Migration of German-Speaking Neuroscientists

"Vienna's culture was one of extraordinary power, and it had been created and nourished in good part by Jews. My life has been profoundly shaped by the collapse of Viennese culture in 1938. … The sense of loss is heightened by the fact that Vienna was my birthplace, my home."

– Eric Kandel, *In Search of Memory* (2007)

Stahnisch currently conducts a historical research project … that aims to document and analyze the impact of the forced migration of German-speaking neuroscientists.

BY FRANK W. STAHNISCH, MD, MSC

If one looks at cultural influences on modern brain research from a historical perspective, it is useful to take into account the ground-breaking developments in 20th century clinical neuroscience that emerged through the forced migration of German-speaking neurologists, neuropathologists and neurosurgeons after the rise of Nazism and Fascism in Central Europe. Following the massive expulsion of Jewish and politically opposed neuroscientists from the German-speaking countries to North America after 1933 (a development that saw approximately 600 researchers and physicians with neurological training and scientific experience driven into exile), the various relationships between neurology, psychiatry, pathology and experimental psychology underwent gradual readjustment.

Frank W. Stahnisch, MD, MSc COURTESY OF THE UNIVERSITY OF CALGARY

Eric Kandel (left) at a medical conference at the NIMH in Bethesda, MD, circa 1965. COURTESY NIH

The effect this process had on the pre-existing research cultures in the U.S. and Canada was the rapid transformation of the brain research field into one of the most prolific areas of biomedical knowledge production. The founding of the National Institutes of Health in 1948 and particularly the research conducted by the National Institutes of Mental Health and the National Institute of Neurological Diseases and Blindness in Bethesda, Md., since the 1950s were landmark events that mark this transformation phase in the formation of early neuroscience. This was a period when many émigré doctors and neuroscientists became relicensed and intended to resume their work in clinical care in North American postwar neuroscience institutions.

Karl Bonhoeffer, 1938

Often whole research schools were expelled under the Nazi and Fascist governments: An illustrative example of this is the group of academic disciples and coworkers of the director of the clinical department of psychiatry at the Charité in Berlin, Karl Bonhoeffer (1868-1948). Nearly one third of his longtime research associates had to seek refuge in North America. This illustrious group of psychiatrists and neurologists included Paul B. Jossmann (1891-1978) who went to the Veterans Administration Outpatient Clinic in Boston; Lothar Bruno Kalinowsky (1899-1992) who shifted his work to the Mount Sinai Hospital in New York City; Franz Joseph Kallmann (1897-1965) who led the Genetics Laboratory of the New York State Psychiatric Institute between 1938 and 1961; Fred Quadfasel (1902-1981) who worked at the Hospital of the Veterans Administration in Boston; Herta Seidemann (1900-1984) who likewise went to New York City, where she assumed the post of a staff attending physician at Montefiore Hospital in Brooklyn, and Erwin W. M. Strauss (1891-1971) who was the only physician from the former Berlin group to settle in the traditionally southern state of Kentucky.

Stahnisch currently conducts a historical research project — funded by the Canadian Institutes of Health Research (CIHR) — that aims to document and analyze the impact of the forced migration of German-speaking neuroscientists to Canada and the United States after the 1930s and 1940s, while specifically focusing on theoretical concepts and scientific applications of interdisciplinarity in 20th-century neuroscientific research. The aims of the research project are: first, to describe the general research topic; second, to show how a new model can be applied to historiography and social studies of neuroscience; third, to provide a deeper understanding of the influence of Central-European émigré-researchers on the emerging field of neuroscience after WWII.

With this article, Stahnisch seeks assistance from the international community of neurologists regarding existing archival collections, personal papers and diaries, along with personal accounts by former colleagues, pupils and family members, in order to gain information about German-speaking émigré neuroscientists in North America.

For a preliminary article on the scope and depth of the research project, see: OEZG. 2010;21:36-68 (**www.univie.ac.at/oezg/OeZG103.html#A2**). •

Stahnisch is a medical historian at the University of Calgary, Alberta, Canada. Visit the history of medicine and health care program at **homhcp.ucalgary.ca**.

Neurology Nursing in Kenya: The Current State and the Way Forward

BY JOLYNNE MOKAYA

Neurological disorders make up at least 25 percent of the global burden of disease and are responsible for an even greater proportion of persons living with disability (Silberberg and Katabira, 2006). Factors such as malnutrition, adverse perinatal conditions, malaria, human immunodeficiency virus and acquired immune deficiency syndrome (HIV/AIDS), meningitis, demographic transitions, increased road traffic accidents and persistent regional conflicts have increased the prevalence of neurological disorders in Sub-Saharan Africa (Silberberg and Katabira, 2006).

Jolynne Mokaya

A study of Parkinson's disease carried out in rural Tanzania showed that prevalence rates were higher than what has been previously reported from Sub-Saharan Africa. The crude prevalence rates were 30/100,000 (men), 11/100,000 (women) and 20/100,000 (combined) showing only a slight difference when compared to the prevalence rates with the U.K. population. This illustrates the fact that neurological diseases are equally a problem in Africa as they are in the Western world. Many Parkinson's disease patients and many individuals with other neurological diseases in Sub-Saharan Africa may never be diagnosed or treated, with consequent reduction in their life expectancy and quality of life (Dotchin et al., 2008)

With the current increase of neurological diseases globally, health care professionals are expected to see an increasing number of patients living with neurologic conditions including dementia, stroke, epilepsy, Alzheimer's and Parkinson's disease. Policymakers, therefore, must help ensure there are properly trained clinicians available to provide high-quality care (American Academy of Neurology Professional Association). The World Health Organization identified a shortfall of 4.3 million trained health workers in 2006, with the biggest disparity in Sub-Saharan Africa.

Kenya has an estimated population of 41 million, most of whom live in the rural areas (Index Mundi, 2012). Medical standards, such as income distribution, reveal huge differences between various segments of the population. Like many developing nations, there are too few health care providers for the growing population, and only 30 to 40 percent of all Kenyans have access to improved sanitation, clean water and decent health care (InterNations, nd).

Public (government service), private and missionary hospitals are the three major providers of health care in Kenya, with public hospitals being the major health care providers to the majority of the Kenyan population (Amayo, 2006). Kenyatta National Hospital is the largest public hospital, with 7.5 percent of all medical cases seen in this hospital being neurological illnesses (Kwasa 1992).

The HIV/AIDS pandemic has evolved to being the major clinical challenge of neurology practice in Kenya due to the rise of neurological complications associated with it. More than 60 percent of all hospital beds are occupied by HIV-related illness in public hospitals. On the other hand, non-communicable diseases with their neurological sequelae are becoming epidemic due to the changing pattern of lifestyle. Once considered rare, multiple sclerosis is now being diagnosed frequently, and age-related diseases are on the rise as the population ages offering major management challenges (Amayo, 2006).

With the current increase of neurological diseases globally, health care professionals are expected to see an increasing number of patients living with neurologic conditions including dementia, stroke, epilepsy, Alzheimer's and Parkinson's disease. The World Health Organization identified a shortfall of 4.3 million trained health workers in 2006, with the biggest disparity in Sub-Saharan Africa.

With awareness of the massive burden associated with neurological disorders, it is recognized that neurological services and resources are disproportionately scarce especially in low income and developing countries (WHO, 2005). The situation in Kenya is worse; currently, there are only 11 neurologists with most of them in private practice and working in Nairobi. In Kenya, the majority of health care providers are nurses who receive little or no training in how to diagnose and treat the common neurologic conditions that present to them every other day. There is not a single nurse trained in neurology, nor is there a training institution of neurology for nurses in Kenya. Lack of mentorship makes it difficult for most nurses to be involved in neurology, and it is sad that the majority of nurses are not aware that they could specialize in neurology (Hooker, 2013).

Nurses bring an important voice and point of view to management and policy discussions. It is crucial to involve them not only in hospital management and patient care but also in being part of various organizations, societies and bodies promoting neurology worldwide.

Training of nurses is particularly important globally. In low income countries such as Kenya where few physicians exist, nurses are involved in making diagnostic and treatment decisions.

Previous training of nurses in Kenya concentrated on the cadre of enrolled nurses and registered nurses. However, with the increasing development of the society, a higher level of training for nurses has become necessary to meet the challenging demand for high-quality nursing care (NNAK, 2009). The health sector reforms that are currently being introduced in Kenya not only require highly qualified nurses but also highly specialized nurses for effective and successful implementation (Muga et al, nd). It is crucial and essential for nurses to be endowed with the necessary knowledge, skills and attitudes to be able to give quality service.

Availability of funds, scholarships, training opportunities and mentorship programs should also be made available to nurses and other health care providers in low income countries and regions with few or non-specialists in neurology, to encourage and have more health care providers train and specialize in neurology. •

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Mokaya is a final year student in the bachelor's degree program in Nursing Sciences at the University of Nairobi. The University of Nairobi is the pioneer institution of university education in Kenya, situated in Nairobi. It is committed to quality through teaching, research and creative works, fostering an intellectual culture that bridges theory with practice, and producing holistic graduates prepared for a life of purpose, service and leadership.

Mark Your Calendars

2013

Fifth Asian-Oceania Congress of Clinical Neurophysiology (5-AOCCN)
Aug. 28-31, 2013
Bali, Indonesia
http://aoccnbali2013.com/

XXI World Congress of Neurology
Sept. 21-26, 2013
Vienna
http://www2.kenes.com/wcn/Pages/Home.aspx

European Paediatric Neurological Society (EPNS) Congress
Sept. 25-28, 2013
Brussels
http://www.epns2013.be/

Congress of the European Committee for Treatment and Research in Multiple Sclerosis
Oct. 2-5, 2013
Copenhagen
http://www.ectrims-congress.eu/

19th Congress of Child Neurologists of Mediterranean
Oct. 17-19, 2013
Budva, Montenegro
http://www.cnm2013.eu

XVI World Neurosonology Meeting
Oct. 17-20, 2013
Sofia, Bulgaria
http://www.nsrg2013.net/

Third International Conference on Neurology and Epidemiology (ICNE 2013)
Nov. 21-23, 2013
Abu Dhabi, UAE
http://www.icne2013.com

Society of Neuro-Oncology Annual Meeting
Nov. 21-24, 2013
San Francisco, USA
http://www.soc-neuro-onc.org/

2014

Eighth Symposium on Neuroprotection and Neurorepair — 2014
April 9-12, 2014
Magdeburg, Germany
http://www.neurorepair-2014.de/

Alzheimer's Disease International Annual Conference 2014
May 1-4, 2014
San Juan, Puerto Rico
http://www.adi2014.org/

International Child Neurology Congress 2014
May 4-9, 2014
Igazu Falls, Brazil
http://www.icnapedia.org/

EFNS-ENS Joint Congress, Istanbul 2014
May 31-June 3, 2014
Istanbul
http://www.efns.org/EFNS-ENS-Joint-Congress-Istanbul-2014.877.0.html

Movement Disorder Society Annual Congress 2014
June 8-12, 2014
Stockholm
http://www.movementdisorders.org/congress/past_and_future.php

Congress of the European Committee for Treatment and Research in Multiple Sclerosis 2014
Sept. 10-13, 2014
Boston, USA
http://www.ectrims.eu/conferences-and-meetings

Ninth World Stroke Congress
Oct. 22-25, 2014
Istanbul
http://www.world-stroke.org/meetings/world-stroke-congress

Highlights of the 53rd International Neuropsychiatric Pula Congress

The 53rd International Neuropsychiatric Pula Congress (INPC) was held June 19-22, 2013, under the auspices of the Croatian President Prof. dr. Ivo Josipovic. The congress is traditionally held in Verudela Hotels Park Plaza Histria and Brioni, and organizers are: Kuratorium International Neuropsychiatric Pula Congress and the Department of Medical Sciences of the Croatian Academy of Sciences and Arts. The supporting organizations of the Congress are: World Federation of Neurology, WFN Applied Research Group on the Delivery of Neurology Services, International Interdisciplinary Medicine Association, European Psychiatric Association, Central and Eastern European Stroke Society.

This year, the congress was endorsed by WFN. The main sponsors of the congress were the Ministry of Science, Education and Sports of the Republic of Croatia, the City of Graz and the City of Zagreb. More than 350 participants attended representing Australia, Austria, Bosnia, Croatia, Czech Republic, Germany, Great Britain, Herzegovina, Hungary, India, Italy, Lithuania, Macedonia, Montenegro, New Zeeland, Poland, Romania, Russia, Serbia, Slovenia, South Korea, Spain, Sweden, Switzerland, Thailand, Turkey, Ukraine, the United States, and many more.

The main theme of this year's congress was Depression and Pain — What Is the Link? The theme of the joint meeting of the International Neuropsychiatric Pula Congress in the Section of Neuroscience Alps-Adria offered discussions about different therapeutic approaches. Beside the main theme during this year's congress, numerous symposiums were also held: the Second European Summer School of Psychopathology in Pula, the Sixth Pula International Symposium on Epilepsy, the Second Interface Providers in Neurorehabilitation Symposium, the First Pula Neuro-interdisciplinary School, psychiatric symposia on Law on Psychotherapy, Forensic Psychiatry, CSF Signaling and CSF Biomarkers, neurological symposia on Music and Rhythm in Restoring the Brain, Advanced Treatment of Parkinson´s Disease and Diagnosis and Treatment of Low Back Pain. On Wednesday evening, the traditional academic lecture was given by Professor Luigi Agnati, who presented the latest findings on the Volume Transmission Mode and Potential Clinical Impact.

Vida Demarin, MD, honorary president of the INPC Congress, and Bosko Barac, MD.

This year's International Neuropsychiatric Pula Congress has once again proved that there is a need and interest to organize such a congress where multidisciplinary approaches to numerous interesting topics in the field of both neurology and psychiatry is maintained, and which has during more than half a century maintained the continuity of meeting that has become known as "The Pula School of Science and Humanism," as it was often emphasized by prominent speakers, honored guests and participants of the oldest international congress in the field of neurology, psychiatry and neuropsychiatry. •

Report from the European Stroke Conference

BY SHAILY SINGH

I'm deeply grateful to the WFN for awarding me the Junior Traveling Fellowship in 2013 to visit the European Stroke Conference held May 27-31, in London.

The conference was attended by more than 3,500 delegates from around the world. Following is the brief outline of the meeting and its structure and discussion items.

Shaily Singh

The meeting was broadly divided into different themes, with parallel symposia, teaching courses, debates and controversies, oral paper sessions, poster presentations and plenary lectures.

The various themes were acute stroke treatment both interventional and medical, intracerebral hemorrhage, translational neuroscience, arteriopathies, childhood stroke, rehabilitation, small vessel disease, imaging, neuroprotection, outcomes and quality of health services, risk factors, anticoagulation in stroke, and alternative therapies to name a few.

The plenary sessions were on the awards on stroke research and also new trial results announced, including INTERACT 2, SPS3, STITCH 2, imaging results of IST3, etc.

A huge number of research papers and posters were presented during this meeting.

There were parallel halls for oral presentations with different themes to select the area of stroke one is interested in. The timing, discipline and attendance was par excellence.

I had one abstract accepted as first author and was a co-author on one other.

Special e-poster sessions with presentations and question-and-answer sessions were undertaken for the first time for highly rated abstracts. There was a lot of interaction during my e-poster presentation and new ideas generated.

Overall, this meeting was an excellent feast of stroke academics and gave me a great opportunity to present our institutional research, to interact with other stroke researchers from around the world and to collaborate for future research. •

Singh is assistant professor of Neurology at the Institute of Human Behavior and Allied Sciences In Delhi, India.

WFN APPLIED RESEARCH GROUP

Organization and Delivery of Neurological Services

BY LEONTINO BATTISTIN AND VIDA DEMARIN

Members of the WFN Applied Research Group (ARG) from many different countries are active in their regions. In 2012, we were focused mainly on Central and Eastern European countries, and we organized several meetings.

As part of these activities, members of the ARG were active in their research, related to importance of delivery of neurological services, educational activities and spreading the knowledge to our colleagues in many parts of the world. Vida Demarin was active at the Eighth Congress of the Society for the Study of Neuroregeneration and Neuroplasticity (SSNN) in March 2012 in Dubrovnik; Management of Pain in November 2012 in Moscow; Neurological Meeting on Stroke in March 2012 in Ljubljana, Slovenia; Challenges on Stroke in April 2012 in Belgrade, Serbia; and Neurological Symposium on Headache in May 2012 in Tuzla, Bosnia and Herzegovina, to mention just a few of them.

Our gorgeous city of Dubrovnik was the host of the 23rd Summer Stroke School with international participation June 4-8. For the first time, the summer school was under the auspices of Croatian Academy of Sciences and Arts. The usual and proud auspicates are Inter-University Center Dubrovnik, Croatian Stroke Society, Medical School University of Zagreb, Central and Eastern European Stroke Society and Research Group on Delivery of Neurological Services (RGODNS) of World Federation of Neurology (WFN). The joint meeting of ARG ODNS and the 23rd Summer Stroke School was organized in Interuniversity Center in June 2012 in Dubrovnik.

The aim of the course was to support the cooperation and promote exchange of knowledge and experience among participants from different countries. This meeting shed new light on epidemiology of stroke, its primary and secondary prevention, diagnostics, therapy and rehabilitation. All participants had a unique opportunity to share their national stroke data and discuss about specific stroke problems of their country. Countries of the East and West Europe had an opportunity to work together on solving problems related to stroke, whether they were medical, economical or of some other nature. We can't skip mentioning that all the hard work was awarded by rich social program during the evenings. We look forward to 2014 course already.

> All participants had a unique opportunity to share their national stroke data and discuss about specific stroke problems of their country. Countries of the East and West Europe had an opportunity to work together on solving problems related to stroke.

The 52nd International Neuropsychiatric Pula Congress (INPC) was held June 20-23, 2012 under the auspices of the Croatian president Ivo Josipovic. The congress is traditionally held in Verudela Hotels Brioni and Histria, and organizers are: Kuratorium International Neuropsychiatric Pula Congress, Sestre Milosrnice University Hospital Center, Zagreb, and this year, the Department of Medical Sciences of the Croatian Academy of Sciences and Arts. The main sponsors of the congress were the Ministry of Science, Education and Sports of the Republic of Croatia, the city of Graz, the city of Zagreb and Istria County. This year, more than 350 international particpants attended the congress.

The main themes of the congress were recent achievements in restorative neurology, new advances in psychopathology — the interaction of biological and psychological factors. The theme of the joint meeting of the International Neuropsychiatric Pula Congress in the Section of Neuroscience Alps-Adria was discussions about different therapeutic procedures. Besides the main topic during this year's congress, numerous symposia were also held: roundtables and workshops in collaboration with the Central and Eastern European Stroke Society (CEESS), World Federation of Neurology, Research Group on Delivery of Neurological Services (WFN RG ODNS) and one topic symposium related to dilemmas in therapies for different neurological disease (stroke, multiple sclerosis, epilepsy and Parkinson's disease) and the Croatian branch of the Italian Cochrane Centre (CBICC) on the topic: Introduction to the Cochrane systematic review and application of evidence-based medicine in everyday practice, the meeting of the European Society of young neurologists and residents (European Association of Young Neurologists and Trainess - EAYNT), European Summer School of psychopathology in Pula, fifth Pula International Symposium on Epilepsy, neuro-otological course of vertigo, the European standards for doctoral studies in the field of neurology, a symposium on forensic psychiatry, the German Symposium on the ongoing training in neuropsychiatry (Deutschsprachiges Neuropsychiatrisches Fortbildungs Symposium), a symposium on the quality of life of psychiatric patients, a symposium on connecting providers in neurorehabilitation, a symposium on the role and experiences of nurses in the care of patients with incontinence, symposium on deep brain stimulation, interactive school about headache and symposium on palliative care.

We are proud to announce that this year's 53rd INPC Congress in Pula June 19-22, 2013, had the endorsement of the WFN. We are grateful for all efforts related to ARG organization and its activities. •

Battistin is president of the ARG OSNS, and Demarin is the secretary-general of the ARG ODNS.

SMAGULOVICH

continued from page 2

doctoral dissertations were devoted.

He is the author of more than 78 scientific works, including a training manual for graduate students, interns and doctors, as well as methodical recommendations, including "Diagnosis and treatment of atherosclerotic transient cerebral ischemia" and "Electroneuromyographic criteria for early diagnosis and monitoring of pharmacological correction of subclinical and clinical manifestations of polyneuropathy in patients with newly diagnosed Diabetes mellitus type 2."

Smagulovich and the members of the Institute of Neurology and the League of Neurologists of Kazakhstan in collaboration with the Kazakh National Medical University and the Almaty State Institute of Advanced Training of Physicians organized "Actual Problems of Neurology," an annual conference in Almaty with international participation.

He was awarded the badge "High Achiever of Health Care of Kazakhstan" and certificates of honor of Kazakh National Medical University.

Smagulovich was a doctor of the highest qualification category, great clinician, gifted teacher, caring husband, father, son, brother, true friend, kind and sympathetic person.

Condolences to the family, friends and colleagues for this great loss. •

Research Group on Neuroethics

BY FRANZ GERSTENBRAND

Ethics in neurology are the basis of all practical work as well as for research activities. In a critical analysis of the used ethical principles, it has to be stated that the contemporary ethical laws are missing different religious, traditional and cultural requirements. The contemporary ethics are based on the philosophy of Socrates, Plato and Aristotle, with the incorporation of the Christian philosophy of Saint Augustinus and Thomas Aquinas and should be called Western Ethics. But Western Ethics must not be acceptable worldwide. The ARG Neuroethics decided to found a task force with the aim to harmonize the ethical principles in neurology including transcultural considerations. As members of the task force, representatives of the Buddhism and Hinduism, the Islamic and Mosaic religions and the different Christian communities are invited.

Franz Gerstenbrand

As a continuous activity of the ARG Neuroethics, the organization of teaching courses and informative workshops has to be mentioned. The organizers of neurological congresses and symposia are asked to include special lectures and training courses in the program. The great lack of ethical knowledge in scientific reports about new treatment programs or research projects is shameful fact and has to be strictly changed. A continuing ethical education is necessary.

The ARG Neuroethics is asking for more active cooperation and for helpful support to follow the education for a better knowledge in ethical thinking and moral responsibility. The aim for a worldwide acceptable basis for ethical principles in modern neurology needs great knowledge and an intensive preparatory work in philosophical, moral and ethical issues. •

Gerstenbrand is chairman of the Research Group on Neuroethics. He can be reached at f.gerstenbrand@aon.at

Opportunities in Global Neurology for Trainees

BY JORI FLEISHER, MD,
AND SARAH WAHLSTER, MD

The past several decades have seen a groundswell of interest in the practice of neurology in low- and middle-income countries. As established clinicians, researchers and groups such as the World Federation of Neurology, American Academy of Neurology and the European Federation of Neurological Societies (EFNS) turn their attention to improving the care of neurology patients around the globe, tremendous opportunities for international collaborations have arisen. Even more recently, our specialty has seen a rise in individual efforts, or "bottom-up" approaches to global involvement, with the impetus frequently coming from trainees.

Jori Fleisher, MD

Sarah Wahlster, MD

The unification of organizational interests with the growing demand for international opportunities by trainees could not come at a more opportune time. Currently, neurologic disorders account for more than 8.7 percent of premature deaths and years lived with disability worldwide.[1] Stroke alone accounts for 4.1 percent of all disability-adjusted life years (DALYs), followed by Alzheimer's disease and other dementias, epilepsy, migraine, Parkinson's disease, CNS infections and neoplasms. Importantly, these estimates do not include traumatic brain injury, a major cause of premature death and disability particularly in rapidly developing nations. Such statistics take on even greater urgency in light of the dearth of neurologists in low- and middle-income countries. In one study, 23 African nations averaged one neurologist per 5 million population, with 12 countries having none.[2]

In parallel with growing epidemiologic recognition, neurologists and trainees have found more avenues for clinical involvement abroad. Numerous models exist, from brief visiting professorships, global brigades and mobile clinics to long-standing inter-institutional collaborations. Here, we briefly reflect on our experiences with several models and future directions.

Many opportunities are available at individual medical schools for students to spend a week or more abroad, shadowing in hospitals or freestanding clinics, or setting up makeshift clinics to provide acute, primary care to all comers. As a starry-eyed trainee, these rotations can be inspiring, yet raise concerns. In one author's experiences (JF), during 10- to 14-day-long trips to Central America and Jamaica, such makeshift clinics were erected and provided care to hundreds of patients who might otherwise be untreated. In addition to such ubiquitous primary care concerns of headache and low back pain, countless individuals with intestinal parasites, malaria and other tropical diseases were treated. Such trips inevitably raise the question of sustainability, and whether we are instantiating a culture of "duffle bag medicine" that does more harm than good.[3] For example, a day laborer and father of six in his early 40s presented to our Jamaican clinic with early-onset Parkinson's disease. As a student, one's initial thrill at recognizing clinical signs and making a diagnosis is quickly overshadowed by the knowledge that the one-month supply of carbidopa-levodopa available may only offer the patient 30 days of false hope.

Some of these shortcomings can be overcome with careful pre-trip collaboration with local practitioners. Arrangements can be made in advance for patient referrals, and the visiting clinicians can arrive with a working knowledge of local treatment patterns and availability. Short trips and pop-up clinics often spark a more deep-seeded commitment to global health that will shape participants' careers. Furthermore, relationships formed between visiting trainees and local providers can be nurtured into fruitful partnerships in the future.

To that end, longer-term collaborative relationships have been formed, yielding additional opportunities for trainees. A key component to ensuring sustainability in these relationships is to work closely with local providers and carefully elicit their input about the needs at their institutions. These partnerships can be focused on building collaborative research projects as well as fostering a didactic exchange and improving medical education.

One example of such a formal collaboration is the Botswana-UPenn Partnership. Established as a means of building clinical and research capacity in Botswana in response to the HIV epidemic, this decade-long connection has fostered the growth of primary care residency programs in Botswana, countless research studies, and the Global Health Equities Residency Track at the University of Pennsylvania's various residency programs.

While medical students and residents can apply to spend a single rotation in Botswana, the track provides U.S. trainees with in-depth training on the geo-socio-political context of the nation in which they will practice. Two four- to six-week-long rotations are spent on the medical wards in Botswana, providing clinical care and engaging in a scholarly pursuit. Working with partnership-affiliated attending physicians and local practitioners, trainees are incorporated into ward teams or able to provide specialty consultation services.

Many opportunities are available at individual medical schools for students to spend a week or more abroad, shadowing in hospitals or freestanding clinics, or setting up makeshift clinics to provide acute, primary care to all comers.

Extended and repeated stays provide invaluable insight into the epidemiology of disease, team practices, as well as the challenges of providing the best possible care with the available diagnostic and therapeutic modalities. Neurologic in-patients tend to be plentiful, comprising about 30 percent of all medical admissions, with stroke, epilepsy, meningitis, Guillain-Barre, myelopathies and CNS complications of HIV/AIDS, among the most common chief complaints.

While rotating at a partner site, there are numerous opportunities to contribute to the medical education, clinical care and research efforts in collaboration with local providers. Such collaborations have infinite future directions. Investing in the education of trainees and students at the site is a first and crucial step to improve the care of neurological patients in a sustainable fashion. At partner sites with no local neurologist, one way to support local providers is to create a targeted curriculum, based on the most commonly seen, treatable conditions and available resources. Also, participating in teaching initiatives at the local medical school and inspiring young trainees in these areas to pursue a career in neurology can potentially improve neurological care within the country.

Research initiatives may improve diagnostic and therapeutic options in countries with limited resources. Also, scholarly pursuits can be fostered through organized mentorship as well as joint authorship of case reports and research studies. New advances in technologies also lead to a wealth of opportunities for continuous interaction and collaborative efforts between sites. The Partners Neurology Residency Program has initiated a recurring series of teleconferences with their partner sites in Uganda and Mexico, during which residents and faculty at both sites discuss interesting cases, provide neurological consultation or share didactic conferences. Another advantage of telemedicine is the potential to share neuroimaging studies, EEG data files and pathology images. While difficulties with the Internet connection in developing countries remain a major challenge for videoconferencing and the transfer of larger files, continuous communications via email and emerging technology can foster a frequent exchange between sites and perpetuate sustainable connections.

Numerous other models exist for global neurology collaborations, including Medical Education Partnership Initiatives (MEPI), NIH/Fogarty program, established visiting professor programs, AAN's Global Health Section, and WFN's International Working Group of Young Neurologists and Trainees. Furthermore, opportunities for participation increase as students and residents advance in their training.

The most critical step in any collaboration, however, is to ensure mutual understanding and benefit, with an eye toward building capacity for neurologic care in developing nations. Barriers to such programs include funding, limited or no pre-trip training for clinicians causing misunderstandings once in country, and poor resource sharing.

In addition to international partnerships, we recognize the tremendous potential for collaborations among globally minded neurology departments and trainees in the developed world to facilitate these exchanges, share resources and foster funding opportunities. We are currently laying the groundwork for a Neurology Global Health Consortium by uniting interested and experienced neurologists from across the U.S. By gathering the collective wisdom of individuals with experience in clinical practice, education and research abroad, we hope to learn from each other and serve as a resource for other interested trainees.

To learn more about the proposed consortium, contact Wahlster at **swahlster@partners.org**. To learn more about additional opportunities, contact Fleisher at **jori.fleisher@uphs.upenn.edu**. •

Fleisher works in the Department of Neurology at the University of Pennsylvania, and Wahlster is with the Partners Neurology Residency Program at Brigham and Women's Hospital, Massachusetts General Hospital, Harvard Medical School.

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Symposium: Developing Neurology in

BY RAAD SHAKIR, FRCP, SECRETARY-TREASURER GENERAL, WFN

The Japanese Society of Neurology (JSN) held its annual meeting in the state-of-the-art Tokyo Forum May 29-June 1. There were 6,713 participants. The meeting was primarily in Japanese with enough English language sessions to make a non-Japanese speaker fully occupied with excellent sessions from Japanese and invited speakers. There were many highlights throughout.

The inclusivity and international openness of our Japanese colleagues as well as their willingness to open up and collaborate with neurologists from across the globe were exemplified in organizing a Symposium on Developing Neurology in the World. This was the brainchild of Professor Hidehiro Mizusawa, president of the JSN and the congress. Following consultations, five invited speakers in addition to our host participated. The regions represented were Asia, by Man Mohan Mehndiratta (India), president of Asian Oceania Association of Neurology (AOAN) and WFN regional director; Africa represented by Amadou Gallo Diop (Senegal), co-director Africa Initiative WFN; South America represented by Renato Verdugo (Chile), president of WCN 2015; Central America represented by Marco Medina (Honduras), regional director WFN; and me representing Europe and international collaboration. The meeting was co-chaired by Ryuji Kaji (Japan), head of the Asia WFN. The symposium was honored by the attendance and participation of Professor Jun Kimura, past-president WFN.

The meeting was opened by Ryuji Kaji with comments on the situation of neurology in Japan and the WFN Asia Initiative. This was followed by Hidehiro Mizusawa, who gave a historical perspective followed by an impassioned commitment to internationalization: "It is quite important we are communicating constantly and simultaneously with other countries and other peoples, and appreciate other ways of thinking around the world. This is internationalization." Mizusawa talked about the collaboration with AOAN, EANF (East Asia Neurology Forum), AAN and WFN.

I presented the current status of the EFNS training. The EFNS has 45 member societies plus nine associate member societies. The European Board of Neurology (EBN) is under the umbrella organization of the European Medical Specialists Board (UEMS). This represents 34 countries and holds board examinations in English. The latest was in Stockholm in September 2012 with fellowships to those candidates from the EU and diplomas for those from outside the EU. The curriculum and the examination are well structured and quite advanced. There was a lot of interest from the audience in the way it has been organized and conducted.

The EFNS has many other activities not only in Europe but also in the Mediterranean basin and Africa. These take many shapes including teaching courses. The next one was in July in Senegal in collaboration with the WFN and IBRO. Many other activities were discussed including fellowships to junior and senior neurologists as well as the department-to-department program. Electronic teaching, e.g. eBrain, is another excellent resource. This is available free to all low and lower-middle-income countries across the world.

The global scene is still lagging and the vast discrepancies in neurological training and specialization are there for all to see. This is exemplified in the WHO neurology atlas, which was published jointly with the WFN in 2004. A second edition is in progress. The WFN's role in training is a prime function of the organization. This has been carried out in accreditation and certification of training programs; site visits; and advice on setting up training with subsequent accreditation and certification.

Figure 1. Training centers in Africa. Red stars are those with a good percentage of African trainees from outside the country. (Diop)

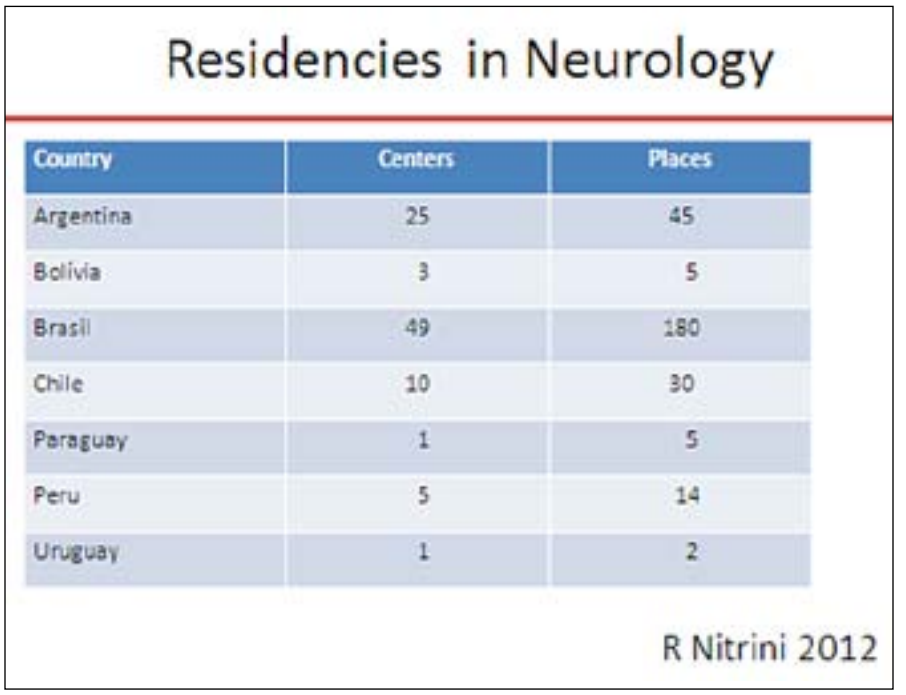

Figure 2. The number of residency placements in neurology in the Neurosure group of South American countries according to a survey performed by Ricardo Nitrini, 2012, and presented during the last Congress of the Brazilian Academy of Neurology. (Verdugo)

The ultimate goal is to create Regional Boards of Neurology under the auspices of regional directors and their councils.

The Asian view was presented by Man Mohan Mehndiratta. Asia is the largest continent with a population of 4.2 billion. Neurology is growing across the region at a varying pace. Neurology training is not harmonized, and the Indian experience was detailed. The establishment of the Indian Academy of Neurology (IAN) in 1991 has resulted in a huge advance in training and research. The programs in Australia/New Zealand, China, Japan, Singapore, Indonesia, Philippines, Malaysia, Thailand and Korea were mentioned, and the possibility as well as the utility of an integrated program were discussed.

> Asia is the largest continent with a population of 4.2 billion. Neurology is growing across the region at a varying pace. Neurology training is not harmonized, and the Indian experience was detailed.

The success story of AOAN in establishing its organizational structure and operational pathways has to be highlighted. This happened primarily because of the enthusiasm and diligence of regional neurologists. The WFN helped in seeding the process, and the success was cemented following that June 2012 meeting in Melbourne. This was an example for all to see, the full support of Australia/New Zealand society ANZAN with their Asian colleagues being instrumental in the development of the regional organization.

Africa and its needs were presented by Gallo Diop. His insights and intimate knowledge of all parts of Africa was detailed. The population of 1 billion is not served well at all. With life expectancy of 53 years and 42 percent of the population less than 15 years old, the task is daunting. The huge treatment gap with a low number of neurologists is a major problem. Neurological training is limited to the North and South with few in the Sub-Saharan region. (See Figure 1.) The locations in Red are those who train Africans from outside their own country. "African neurologists must be trained in Africa," Diop said. A short complementary period spent in a center outside Africa is additional. This is where the WFN can help in setting up and supporting within-Africa training and short placements in subspecialties following certification.

Renato Verdugo presented the current status in South America. The training programs are few, and the percentage of neurologists among medical practitioners is small. The location and spread of neurological residency training programs in Neurosur countries (see Figure 2) shows the dearth of such opportunities and the need for more integration. This is probably, in a way, easier as we are dealing

the World

Raad Shakir (left) and Hidehiro Mizusawa.

with two languages in the whole region. The need for integration and exchange programs is essential.

Marco Medina presented the Central America perspective. The training programs in Guatemala, Cost Rica and Honduras were presented. The Honduras program is a success story of the collaboration of the Honduran Neurological Society and the WFN.

The issue of the process to try to establish a Pan American Federation of Neurological Societies (PAFNS) was presented. Congresses have been held every four years, and there is as yet no established regional organization. The process started at the WCN in Marrakesh and is continuing. Integrated training across the region is the ultimate goal.

One cannot forget the role of major organizations in developing neurology across the world. The American Academy at its annual meetings and programs is a major source of education and contributes to the spread of neurological science and practice. The collaboration was indeed mentioned, as was the academy's generous contribution to WFN activities including the use of Continuum as an education tool which continues to flourish.

To conclude, there are many daunting and huge needs across the world. Our Japanese hosts were most thoughtful in holding such a gathering to look at the issues and try to intervene when and where feasible. This is commendable and welcomed. There are, however, many success stories; the phenomenal success of the EFNS and its regional and international involvement is an example to follow. The AOAN success in its organization is a step in the right direction, the African needs and the way the continent is trying to organize its affairs is impressive as well as the South/Central American efforts to establish their institutions and policies.

Neurology can only progress with such exchange of ideas and by creating the building blocks for the practical implementation of policies. •

Shakir is Secretary-Treasurer General of the World Federation of Neurology.

Fifth Examination of the European Board of Neurology

BY WOLFGANG GRISOLD, SVEIN MELLGREN AND AYAHAN CALISKAN

The European Board Examination in Neurology took place during the ENS Congress in Barcelona June 7, 2013. Twenty-nine candidates attended the examination. These individuals were from Europe (Belgium, Cyprus, Germany, Italy, Portugal, Spain and Turkey) and from outside Europe (Canada, India, Iraq, Jordan, Saudi Arabia, Singapore, South Africa and United Arab Emirates).

Twenty-five candidates passed the examination and became either fellows of the UEMS/EBN or they received a diploma of the UEMS/EBN. The examination has been a joint development of the ENS and EFNS with the contribution of questions by the MDS, the ESO and several other societies and individuals. Also e-Brain donated questions that were adapted and are used in the question pool.

The pattern and methodology of the UEMS/EBN examination previously consisted of 120 MCQs and an oral examination, and also a voluntary case presentation. All of the questions that were used went through a rigorous quality assessment by the education committee, the Department of Medical Education of the Ege University in Turkey (Caliskan) and a final editing by the examination committee. The 120 MCQs also were weighed according to topics.

The oral examination was replaced by EMQs (extended matching questions), which are case scenarios with eight to 20 possible correct answers. The EMQs test knowledge and examine clinical reasoning. The procedure of development of this new type of examination was time-consuming and could only be completed with the help of several individuals, who are mentioned on the website.

In addition to the quality assessment, each part of the examination, the MCQ and EMQ, are exposed to establishing a passing limit, based on the Nedelsky (MCQ) and the Angoff (EMQ) methods.

The successful participants were then awarded the fellow of the UEMS/EBN (European candidates), or they received a diploma of the UEMS/EBN. This distinction is necessary, as all European candidates have a locally certified clinical training in an EU/EEA country or Turkey, whereas the other candidates do not have this. The EFN honored the candidates by introducing them to the audience before the ENS presidential symposium.

Finally, the case presentation is now a mandatory part of the examination where the candidates have to present a case of their choice and thus receive extra points for presentation, being judged by two examiners.

Based on the experience of the previous examinations, a suitable surrounding, staff and a system of electronic evaluation were available, which made the results clear and final shortly after the end of the presentation.

The successful participants were then awarded the fellow of the UEMS/EBN (European candidates), or they received a diploma of the UEMS/EBN. This distinction is necessary, as all European candidates have a locally certified clinical training in an EU/EEA country or Turkey, whereas the other candidates do not have this. The EFN honored the candidates by introducing them to the audience before the ENS presidential symposium.

Presently, the UEMS/EBN is considered an equal to the national examination by Austria and Belgium, and it is hoped that similar to other sections of the UEMS, the examination will either partly or as a whole replace the national examinations. For the first time, this year the UEMS/EBN examination will be open to candidates worldwide.

The process of the examination and examples can be seen at the UEMS/EBN website.

The UEMS/EBN examination took place for the fifth time and will be taking place next year in Istanbul, at the joint congress of the ENS and EFNS. Both societies, which will soon merge and form the EAN, have contributed by supporting the European board examination by hosting the examination, delivering questions from their scientific panels and also supporting its development, which was funded by the European board of neurology. •

Participants receive diplomas.

First East African Parkinson's Disease Nurse Specialist (PDNS) Course Presented

BY RICHARD WALKER

There is limited access to diagnosis and treatment of Parkinson's disease (PD) in Sub-Saharan Africa (SSA) with few neurologists. PD nurse specialists (PDNS) have become an integral component of multidisciplinary PD care in the U.K. and may be particularly useful in SSA with the lack of specialist doctors. We therefore conducted a PDNS course for East Africa in Moshi, northern Tanzania with joint funding from the World Federation of Neurology (WFN) and the Movement Disorder Society (MDS).

Invitations were sent to different countries throughout East Africa. Nurses needed to be working within a neurology department with a likelihood of caring for PD patients after the course. We had participants from Rwanda (3), Uganda (1), Ethiopia (2), Kenya (4), with two also invited from Nigeria and the remaining 10 from Tanzania, including two occupational therapists and three physiotherapists. The faculty comprised of Richard Walker and Catherine Dotchin (geriatricians with an interest in PD from the U.K.), Louise Ebenezer and Lynda Hind (PDNS from the U.K.) and Juzar Hooker, consultant neurologist (Nairobi, Kenya). Local contributions were also provided by Victor Minde (physiotherapy) and Oliva Msuya (PDNS).

The course was run in English and included diagnosis, drug treatment, motor symptoms, non-motor symptoms, physiotherapy and information provision. At the beginning of the course, we had a round of introductions by the faculty and the course participants in which people talked about their previous experience with movement disorders and the background on the care of movement disorders in the place, and country, where they worked.

The course was primarily classroom based with interactive sessions conducted around PowerPoint presentations from the faculty covering all aspects of PD. There was a particular emphasis on areas that were of specific relevance to Africa, such as health beliefs about the symptoms of PD, and how this affects health seeking behavior; as an example, seeking help from traditional healers as these symptoms are not felt to be a medical problem. Expensive interventions, such as deep brain stimulation, were mentioned, but not in great detail as these are not available in the majority of African countries. We plan to develop appropriate information for SSA in English, which will then be translated into local languages as required. On one afternoon, two local PD patients attended to tell the participants what it was like to live with PD, and this also allowed demonstration of physical signs.

Useful websites, including the MDS and Parkinson's U.K., were demonstrated. Each participant has been given a U.K. PDNS as an email mentor and will produce a report after six months giving details of the numbers of patients with PD they have seen, and the clinical spectrum, as well as the challenges where they work. We also plan to keep participants updated via email of any new relevant developments. Hopefully, this will ensure ongoing interest and contact between the participants themselves, and between the participants and the faculty and mentors.

PDNS Course faculty wearing their gifts.

Despite many challenges, not least getting the participants to Moshi, the course was a great success in large part due to the excellent hosting by Marycelina Msuya, dean of Nursing, and her colleagues at the Nursing School. The group as a whole bonded well as the week went by, and the course was very interactive. They are keen to provide ongoing mutual support. Despite the many other challenges to the care for PD patients in SSA, such as access to affordable and sustainable drug treatment, we have raised awareness and established a cohort of interested and educated health professionals to help take on the challenge.

Evaluation was positive. In September 2013, we will be running a similar course for PDNS in Anglophone West Africa in Accra, Ghana, funded by MDS. This will run in conjunction with a course for non-specialist doctors in Ghana, and other West African countries, which has been jointly funded by WFN and MDS. We hope to run similar courses in other regions of Africa in the future. We are grateful for the support of WFN. •

Walker is consultant physician for North Tyneside General Hospital and honorary professor of aging and international health, Institute of Health and Society, Newcastle University.

Editor's Note

Other faculty members for the course are: Catherine Dotchin, consultant geriatrician at North Tyneside General Hospital, Louise Ebenezer, Parkinson's disease nurse specialist and Welsh PDNS course convener at Princess of Wales Hospital, Bridgend, Lynda Hind, PDNS, information adviser for Parkinson's UK, London, and Juzar Hooker, consultant neurologist, Aga Khan University Hospital, Nairobi, Kenya.

Parkinson's Disease Nurse Specialist (PDNS) Course participants and faculty.

Applied Research Group on Space and Underwater Neurology

BY FRANZ GERSTENBRAND

The Research Group on Space and Underwater Neurology was primarily founded to coordinate studies about the influence of the weightlessness during space flights. After first experiences in the real micro gravity, it could be inferred that mainly the movement system was affected, without an essential influence on the cognitive abilities. The crew members in space stations can perform highest technical programs and difficult scientific projects. As main disturbances in the weightlessness, a dysfunction of the proprioceptive system, the reafference of motor control, was discovered. As a temporary disturbance after the return to the Earth's atmosphere, the "Weightlessness Ataxia" was described by I.B.Kozlowskaya.

Oleg Georgevic Gazenko, the director of the Russian Space Medical Institute, introduced simulated micro gravity in the research program of weightlessness. The Bed Rest Method and the Dry Immersion System are used on volunteers, staying in a horizontal position, cared with all hygienic and nutritional support. With this method, specific scientific programs to study the weightlessness can be performed. As a main result of the different elaborated projects, the dysfunction of the proprioceptive system was confirmed.

In the transfer of the experimental results to clinical conditions, the symptoms of the Bed Rest Syndrome can be stated, showing a polyneuropathy with additional primary muscle atrophies and a posterior tract dysfunction. Clinically, the Bed Rest Syndrome causes great problems in chronic neurological conditions, especially in long-lasting coma states but also in progredient neurodegenerative diseases. Bed Rest Symptoms can be observed in heart disturbances and in elderly people. New methods have to be developed to prevent this secondary complication. The different methods are mainly elaborated from the countermeasures used in real weightlessness.

With the fMRI method, an activation of the sensorimotor regions after a stimulation of the proprioceptive

see **UNDERWATER**, *page 17*

New Developments for the *Journal of the Neurological Sciences*

BY JOHN D. ENGLAND

As the new editor-in-chief of the *Journal of the Neurological Sciences (JNS)*, I would like to introduce the readers of *World Neurology Online* to some new features for the journal. The first and most obvious change is a new "face" or cover for *JNS*. The new cover is more abstract to reflect the modern global era. The design team at Elsevier is also making the journal website more intuitive with easy links to the websites for the World Federation of Neurology (WFN) and *World Neurology Online*.

To fulfill its mission as the official journal of the WFN, *JNS* will continue to publish the best original articles in neurology and neuroscience from around the world. In addition, new areas of special interest, each with a new associate editor, have been added. These new areas and associate editors are "Best Practices" (Carmel Armon), "Global Neurology" (Donald Silberberg), "Basic and Translational Sciences" (Nicolas Bazan), "Outcomes Research" (Bruce Ovbiagele) and "Reviews, Commentaries and Editorials" (Daniel Truong). JNS also has a new editorial board, which is comprised of internationally recognized experts in neurology and neuroscience from around the world.

Working with the publishing team at Elsevier, *JNS* is committed to serving the members of the WFN and strengthening our ties with the World Congress of Neurology (WCN). As such, we will publish the WCN-2013 abstracts as part of the September 2013 issue. Because *JNS* has a tremendous global reach and readership, we believe that this issue will be an excellent vehicle to communicate the new and exciting developments that will be presented at WCN-2013 in Vienna.

Also, Vladimir Hachinski, the president of WFN, and I will be convening a teaching course, "How to Get Published in International Journals" Sept. 23 at the WCN-2013. We believe that this course, which will highlight the new priorities of *JNS*, will be of interest to many WFN members.

JNS is offering a new service called AudioSlides. This feature offers authors of an accepted article the opportunity to include a five-minute presentation (PowerPoint or PDF) with their publications. As the name indicates, the presentation includes audio and slides prepared by the authors and available online at ScienceDirect under an Open Access license. Authors can easily assemble the presentation by using an Elsevier-provided website. We believe that this added feature will be of great benefit to both authors and readers.

The editorial team and I also are exploring ways to provide additional educational programs through the journal. We intend to offer CME-accredited opportunities by linking the *JNS* website to selected educational activities. Many of these activities will contain multimedia content, including videos. We are also working toward providing CME-credits through selected articles in the journal.

All of us on the editorial team of *JNS* look forward to serving the WFN by increasing the prominence and circulation of the journal. We are committed to playing a vital role in addressing the challenges in global neurology and educating neuroscientists, neurologists and allied health care professionals around the world. •

England is editor-in-chief for the *Journal of the Neurological Sciences* and can be reached at **JNS_England@lsuhsc.edu**.

Neurosonology Research Group of WFN Launches Latin American Chapter

BY M. KAPS

In order to promote neurosonology in Latin America, considerable efforts of the Neurosonology Research Group (NSRG) of the WFN have been undertaken during the last two years to establish a Latin American Chapter. The nucleus of the new chapter is spearheaded by a group of Brazilian Neurosonologists chaired by Viviane F. Zetola, MD, PhD, who organized a sonography workshop in October 2012 in Sao Paolo.

For the first time, there also was an opportunity for advanced participants to take part in a practical and theoretical examination according to the regulations of the NSRG. Twenty-three individuals finally passed the challenging certification procedure and received the NSRG document.

The Latin American chapter of neurosonology recently initiated a task force against Sickle Cell Anemia (SCA) in which transcranial ultrasound (TCD) is used to identify SCA patients in need of transfusion therapy in order to prevent stroke. Twenty-two neurologists participated in this pilot project and identified 13 percent of 56 cases examined during one day, carrying increased risk of stroke. The project proved efficient and will be implemented in areas with high prevalence of SCD in Brazil during the next years.

In 1992, transcranial Doppler was introduced in Brazil; neurologists now aim to expand their diagnostic scope to the extracranial brain supplying arteries, which are actually mainly in the hands of non-stroke physicians. Therefore, the priority of the Latin American chapter will focus on education and on implementation of neurosonology in stroke care programs.

"We are looking for partners throughout Latin America to cooperate and to grow. Our chapter welcomes all physicians and investigators practicing neurosonology or that are willing to enter this field," said Zetola, professor of Federal University of Parana (Brazil). The next opportunity to meet members of the Latin American chapter will be during the 16th World Neurosonology Meeting October 2013 in Sofia, Bulgaria (**www.nsrg2013.net**), or the Brazilian Congress of Cerebrovascular Diseases Nov. 13-16 in Fortaleza. •

Kaps is chairman of the Neurosonology Research Group.

Faculty of recent NSRG teaching course in Sao Paulo: (from left) Ayrton Massaro (Brazil), Corina Puppo (Uruguay), Natan Bornstein (Israel), Silvia Cocorullo (Argentina), Viviane Flumignan Zétola (Brazil), Glória Meza Rejas (Paraguay), Manfred Kaps (Germany) and Marcos Lange (Brazil).

Hong Kong Welcomes 2017 World Congress of Neurology

Neurological diseases inflict high morbidity and mortality in China: Stroke is now the No. 1 cause of death with 1.7 million deaths each year; 9.2 million persons live with dementia and almost half of the 4 million people suffering from Parkinson's disease worldwide live in China.

Teaching and research in neurological diseases have advanced greatly in the last decade but we are still far behind the standard in Europe and the U.S. A world congress of neurology in Hong Kong will lift the standard of care and research capability of neurology in China. The Organizing Committee of the 2017 Hong Kong WCN bid has confirmed $200,000 (U.S.) donations to provide scholarship for neurologists from the developing countries to come to Hong Kong and learn from the top experts.

The Bidding Committee also has secured funding of $150,000 (U.S.) from the Hong Kong Tourism Board to support social activities and hospitality arrangement in order to save the congress budget. We will continue to seek more financial support from other charitable foundations in Hong Kong.

The Hong Kong Neurological Society, with the full support of the Chinese Society of Neurology, will promote the mission of WFN in pursuit of the highest standards of neurology and brain health worldwide. The society has hosted a number of successful major international congresses in the field of neurology, neuroscience and related disciplines, including the Third International Symposium of the Asian and Pacific Parkinson's Disease Association in 2001, the Fourth World Congress in Neurological Rehabilitation in 2006, the Ninth International Symposium on Thrombolysis and Acute Stroke Therapy in 2006 and the forthcoming 14th Asian and Oceanian Congress of Neurology in 2014. The feedback on all these meetings, many of which had thousands of delegates, was consistently excellent with regard to both the scientific content and the social and administrative aspects.

As Asia's world city, Hong Kong is a culturally diverse and sophisticated metropolis that blends eastern and western influences into a dynamic destination. Located at the heart of Asia's most popular business locations that also links to Mainland China, Hong Kong is a highly accessible and safe city that is renowned for its success in hosting significant international and regional conventions from the World Trade Organization's Sixth Annual Ministerial Conference to a number of the world's high-profile conventions. The liberal visa policy allows foreign visitors from more than 160 countries to visit Hong Kong visa free.

Hong Kong has the world-class facilities, state-of–the-art venues like the Asia World-Expo providing function space with exhibition halls and meeting space of various sizes, a vast array of accommodations and professional support services to make conference an ultimate success, not to mention the whole experience of great dining, diverse shopping opportunities, sightseeing and exploring the culture and heritage of this vibrant metropolis. A wide selection of tours, ranging from sightseeing harbor cruises to a heritage tour, are also available for delegates to join before and after meetings.

The Chinese Society of Neurology under the Chinese Medical Association is the national organization representing all neurologists and neuroscientists in China. The Chinese Society of Neurology had pledged full support of the Congress should Hong Kong win the bid. With the support of the Beijing Central Government and Hong Kong Special Administrative Region Government, we expect thousands of Chinese neurologists and neuroscientists will attend the Congress.

On behalf of the Bidding Committee, we are confident that the Hong Kong Neurological Society will deliver a successful 2017 World Congress of Neurology and look forward to welcoming delegates from all over the world to experience the unique and truly exhilarating experience that is Hong Kong. •

Come to Seoul for WCN 2017

Since its establishment in 1982, the Korean Neurological Association (KNA) has demonstrated stable growth over the last three decades, and a lot of effort has been made to take the KNA to a global level. (For more, see "Changing Face of KNA" in Neurology 2013;80:1145-1147). Keeping up with the 30th anniversary of the KNA in November 2012, the KNA is currently preparing to make a new leap forward by planning to host WCN 2017 in Seoul.

The members of the KNA strongly believe that hosting the event for the first time in Korea can be meaningful since it will be a great opportunity for them to thank those who helped end the Korean War 60 years ago. It will be amazing for all our professional colleagues to see the unprecedented progress that Korea has made over the last six decades. Furthermore, it will be truly uplifting for those colleagues whose ancestors actually helped us during the war as they see the amazing impact that their sacrifices have brought to all Koreans. This is the reason that the KNA is so eager to host WCN 2017.

Foundation, Development of KNA

The KNA had a late start as an independent branch of the Korean Medical Association due to a rigid medical board system led by the government that did not easily permit the existence of an independent neurologic association. Through many struggles with other related fields, however, the KNA became a separate entity as an official independent academic association in 1982. The following year, the KNA began issuing the *Journal of KNA*. In 2005, the KNA began to issue a separate English journal, the *Journal of Clinical Neurology* (JCN; http://thejcn.com/) to help international readers. The JCN is published quarterly and is indexed in the SCI-E (impact factor in 2012: 1.892). In 1996, the KNA successfully held its first international conference, the Ninth Asian and Oceania Congress of Neurology (AOCN). Inspired by this success, KNA members have become more actively involved in international academic societies. Over the last decades, the KNA has made numerous achievements in the development of the fields of neurology and neuroscience, and has contributed to public health as well.

Current Activities of KNA in Korea

The number of total residents and board-certified members in neurology in Korea increased sharply to about 1,800 members. Since the late 1990s, the KNA has facilitated the establishment of diverse subspecialty societies, and has actively expanded academic exchanges with other countries. Starting with the Korean Epilepsy Society in 1996, 14 subspecialty societies have been founded.

International Activities

One of the major activities of the KNA is international collaboration. The KNA has been putting much effort to build relationships and tighten the ties between Korean neurology and other parts of the world. The KNA has been participating in the East Asian Neurology Forum to share academic knowledge and regional concerns with the neurologic societies of Japan and Taiwan. Along with the Ninth AOCN in 1996, which was the first international academic meeting hosted by the KNA, the Ninth World Congress on Sleep Apnea (WCSA 2009), organized by the Korean Society of Sleep Medicine, and the Seventh World Stroke Congress (WSC 2010), organized by the Korean Stroke Society, were landmark events that strengthened the international network.

Why Seoul as Host for WCN 2017?

Active support from the Korean Government

Come to Kyoto, Japan, in 2017

We, the Japanese Society of Neurology (JSN), would like to host the 23rd World Congress of Neurology in 2017 in Kyoto.

Founded originally in 1902, the JSN has evolved into a large society with its members topping 8,852 in the past 50 years particularly after its separation, in 1959, from the original society where both neurologists and psychiatrists were members.

During those years, Japan has developed superior human resources in a broad range of neurological subspecialty fields and conducted world-class high-quality research, primarily through cooperation with the World Federation of Neurology (WFN) as well as the Asian and Oceanian Association of Neurology (AOAN). In 1961, two years after the establishment of the current JSN, the AOAN was established through the leadership of our founders and its first meeting, the Asian and Oceanian Congress of Neurology (AOCN), was held in Tokyo in 1962. Moreover, in 1975, Japan launched a system to certify qualified specialists in neurology and has since then produced more than 4,866 board certified neurologists and 2,403 senior fellows.

With this system in place, Japan has built a rich environment to nurture its neurologists. With all this in mind, we are proud to say that the Japanese Society of Neurology has been continuously putting its best efforts to advance research, education and medical practice to a level at par with the best international standards.

The Kyoto WCN meeting in 1981 greatly contributed to the development of JSN and AOAN. Along with international cooperation and the achievements of the past 30 years, Japan is determined to make the WCN 2017 another historic meeting that will serve as a springboard to advance the Asia Initiative of the WFN for the worldwide advancement of neurology in both scientific and clinical aspects. In particular, we would like to focus on three issues in WCN 2017. First, the environment and an aging society are urgent global issues that need to be addressed, especially by the rapidly developing economies of the Asian and Oceanian regions. The Japanese Society of Neurology is in a position to contribute greatly in solving the above based on its experience in overcoming similar issues, as has been seen in its measures in controlling Minamata disease, sub-acute myelo-optico-neuropathy (SMON) and in battling dementia.

Second, Japan is a suitable place to share information and discuss the international cooperation related to neurological medical services in the disaster. Japan experienced not only the Great East Japan Earthquake but also the tsunami and nuclear disaster in March 2011, and has been recovering from the triple disasters thanks to the generous support from all over the world. We would like to discuss the role of neurology in disaster medicine as well as express our gratitude to all the countries that kindly helped us.

Third, as a country with a high standard of neurological service and research, exemplified by the establishment of induced pluripotent stem (iPS) cells and brain machine interfaces (BMI), Japan would be an excellent place to share information on highly efficient neurological medical services as well as results of state-of-the-art studies with our international colleagues, especially those in the Asian and Oceanian region.

Kyoto, famous for its rich history and culture, is a major part of Kyoto-Osaka-Kobe metropolitan area located in the central part of the main island of Japan. A former imperial capital with more than 1,200 years of history, Kyoto is a living museum with a fifth of Japan's registered national treasures along with 17 UNESCO World Heritage sites, unmatched anywhere else in the world. In addition, Kyoto is a renowned center for its world-class sciences bearing fruit to many Nobel laureates including Shinya Yamanaka, who was awarded with the Nobel Prize for Physiology or Medicine in 2012. His discovery of iPS cells started a revolution in stem cell research not only in neurodegenerative disorders but also in other fields of medicine. Kyoto residents are renowned for their hospitality. Outstanding service can be expected wherever you go, be it meeting venues, hotels, restaurants or enchanting cobbled lanes, you will be welcomed with all the warmth of the cultural heart of Japan. In addition, because of Japan's reputation for being a friendly and safe place for travelers, tourists feel comfortable traveling alone in the city at any hour of the day.

For the WCN 2017, the Japanese Society of Neurology looks forward to welcoming you to Kyoto, where you can experience the very essence of Japanese traditional and modern culture as well as the major breakthroughs and developments in the field of neurology. •

The Korea Tourism Organization (KTO) and Seoul Tourism Organization (STO) will provide both financial and promotional supports to WCN 2017 to be held in Seoul. The Korean Government, including the Seoul Metropolitan City, sincerely welcomes the World Congress of Neurology and looks forward to meeting the members in Seoul, South Korea, in 2017.

The KNA has extensive experiences in hosting international congresses

Recently, the KNA has successfully hosted many international congresses in diverse fields of neurology. These experiences will certainly help make WCN 2017 a great success.

Providing opportunities for contribution to WFN to new members

By helping the KNA to host WCN for the first time, all members will be inspired by an equal opportunity policy that the WFN pursues in making contributions to the society.

Special considerations provided to participants from developing countries

Diverse academic and financial support programs are available for participants from the developing countries in regards to registration fees, accommodations and travel grants.

Convenience during the whole stay from arrival to departure

The award-winning airport, comfortable accommodations, go-anywhere transportation, attractive places to see, convenient shopping and more create a most memorable trip for all participants.

See, Hear, Feel Korea

Korea offers an abundance of activities and festivals including Temple stay, DMZ tours, traditional SPAs, which are only available in Korea. Korea, with the 5,000-year history embraces the cosmopolitan flair of modern cities. Korean history stretches back thousands of years, and its culture is rich, complex and totally unique. Various palaces, fortresses, gates, museums and monuments are located all over Seoul, allowing visitors to experience the rich historical assets first hand.

Above all, the enthusiasm of KNA for the WCN 2017

Despite aforementioned advantages, nothing can be more important than the enthusiasm of Korean neurologists in hosting this glorious congress for the neurologists from all over the world. We believe that our enthusiasm for hosting the WCN 2017 in Korea will be the main key for the success of the WCN 2017. •

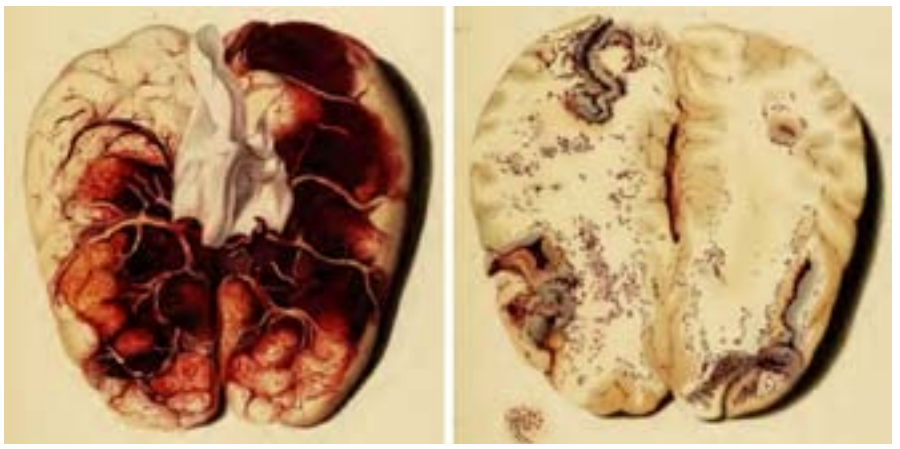

Figure 2. A: Plate V – Thrombosis of the superior sagittal sinus and feeding veins. B: Plate VI – Petechial hemorrhages in cerebral venous thrombosis

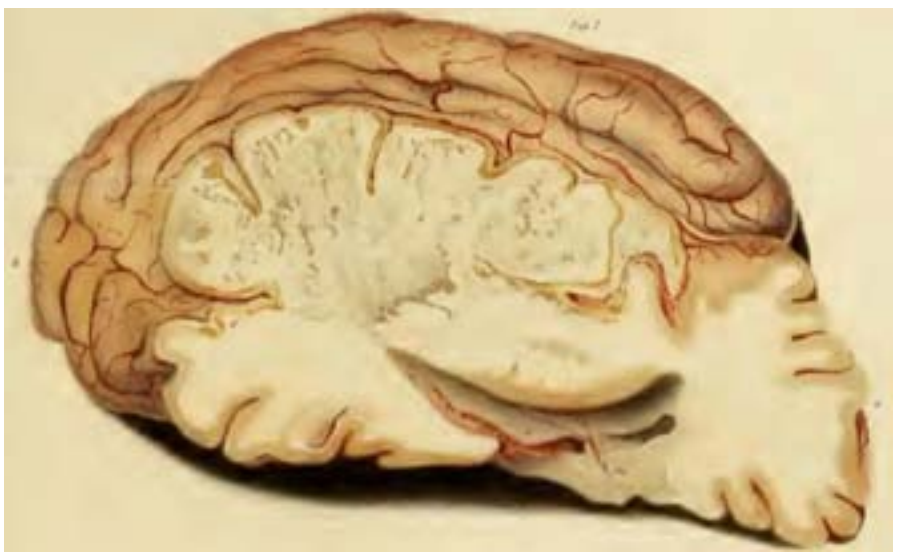

Figure 3. Sagittal section though the left hemisphere showing cerebral softening.

Figure 4. Images from Plates XV and XVI. A: Swelling and softening of the left cerebral hemisphere. B: Striking hyperemia of the swollen hemisphere. The labeling on Plate XV indicates that the right hemisphere was swollen, whereas in Plate XVI the hyperemia is said to be on the left side. It seems that the images are mislabeled.

Figure 5. Images from Plate IX. Left: Partially clotted aneurysm from a patient with a subarachnoid hemorrhage. (Case CXXV) Right: Arteries of the brain with extensive cerebral atherosclerosis in a patient with intracerebral hemorrhage (case CXXXV).

BRIGHT

continued from page 1

information that accrued from autopsies of apoplectics provided facts that were not reconcilable with the humoral theory. Nevertheless, scholarly physicians at the beginning of the 19th century interested in what was then known as "apoplexy" still faced a bewildering assortment of opinions, dogma and hypotheses. "Apoplexy" was a term used by professionals and the educated laity for a disorder that "struck abruptly, causing a sudden abolition of all the activities of the mind, with the preservation, for a time, of the pulse and respiration" (Bonet).

The rest of the populace used the term "stroke" for this condition. Jean Fernel (1544) and Johann Jacob Wepfer (1658) found intracranial hemorrhage at autopsies of apoplectics. These observations were repeatedly confirmed, and the notion took hold that apoplexy (stroke) may be a disorder of cerebral blood vessels, rather than an accumulation of phlegm or some other humor in the cerebral ventricles, as proposed by Galen on the basis of the humoral theory.

The classification of apoplexy that emerged from autopsy reports published in the 17th and 18th centuries was still accepted at the beginning of the 19th century: "sanguineous apoplexy," caused by intracranial hemorrhage, and "serous apoplexy," in which the effusion of serum was held responsible for the apoplectic state.

Morgagni (1769) recognized a third type of apoplexy, in which neither blood nor serum was effused.

On the authority of Morgagni and other "great masters," any amount of fluid present in the ventricles and the subarachnoid space was, for a time, deemed to be abnormal by many scholars and a cause of apoplexy. The concept of "serous apoplexy" endured until the latter part of the 19th century.

Ramolissement

New thoughts on apoplexy emerged as the result of studies at the Paris Hospitals at the turn of the 19th century (Karenberg). While Rochoux (1812) defined apoplexy as cerebral hemorrhage, Rostan's discovery, published in 1819, of the phenomenon of ramolissement (cerebral softening) in patients with the syndrome of apoplexy, led to new notions concerning this condition. Rostan suggested that ramolissement, was a "disease sui generis," a primary disease, and that it was peculiar to the brain, while Lallemand (1820) speculated that ramolissement was an inflammatory condition (Karenberg).

Bright's Reports of Medical Cases

Bright held that the ultimate object of medical research was:"to devise remedies most likely to be beneficial in each form of disease," which, he said, was bound to be facilitated by the understanding of their causes.

To this end, he arranged his cases of diseases of the brain into sections according to what were then understood to be "…. the more obvious sources of disease," namely inflammation, pressure, irritation and inanition.

This article provides a review of Bright's observations and thoughts on apoplexy or stroke, which he recorded in the sections on inflammation and pressure.

Inflammation and Cerebral Softening

In the section on inflammation, Bright described cases illustrative of various inflammatory disorders, such as meningitis, intracranial suppuration, as well as cerebral congestion and also deficient cerebral circulation.

With the first case in this group, Bright established that cerebral softening may be caused by cerebral congestion due to cerebral venous thrombosis. (See Figure 2.) He concluded that venous thrombosis occurred in debilitated states, which in his patient he attributed to pneumonia. To illustrate "the tendency to coagulate which the blood acquires when the system is under the influence of different debilitating causes," he added three cases with systemic venous thrombosis associated with chronic illness and one with ovarian cancer.

Ramolissement Due to Deficient Blood Supply

In the last five cases in this section, cerebral softening was presented as the principal pathological finding. Bright stated that the symptoms generated by cerebral softening resemble those caused by "pressure," which he believed to be the ultimate source of the cardinal symptoms of apoplexy, namely paralysis and impaired consciousness.

Case LXXXI was a 68-year-old man who suddenly became unconscious. When he regained consciousness after 10 minutes, he was hemiplegic on the right, with right hemisensory loss and aphasia. Death occurred about three weeks after the onset of his illness. Softening of the anterior part of the left cerebral hemisphere extending from the fossa Sylvii to the corpus striatum was discovered at autopsy. (See Figure 3.) (Case LXXXI, p 178). The arteries of "fossa Sylvii" "fossa Sylvii," the carotids and of the circle of Willis were extensively diseased, the mitral valve was abnormal.

In the next two cases, the illness developed gradually, and the patients were young (28 and 30 years). Autopsy showed extensive cerebral softening. In one of these cases, there was a remarkable cortical hyperemia of the swollen and softened cerebral hemisphere. (See Figure 4.)

These cases showed severe ossification of the arteries and extensive cerebral softening of one cerebral hemisphere. Bright stated that abnormal arteries: "… certainly produced in my mind an impression that the proper supply of blood had been cut off by some change in the vessels of the pia mater, or some obstruction in their passage through the cineritious substance, and in this way death and disorganization of the brain had been produced."

Bright stated that "ossification of the arteries might well be considered as laying the foundation for defective circulation," and that cerebral softening corresponded to gangrene of the limbs.

These three cases constitute the basis for a concept that was novel at that time, namely that apoplexy (stroke) may be caused by arterial obstruction as well as by the extravasation of blood.

Cases Illustrating the Effects of Pressure

The section on the effects of "pressure" includes cases illustrative of the effects of vascular turgescence, "pressure of the brain from serous effusion independent of inflammation," cases in which some organic change had given rise to pressure, and cases in which blood had been effused from ruptured vessels.

Pressure Due to Effused Serum

Bright maintained that by generating pressure effused serum caused or enhanced apoplexy. He did not use the term "serous apoplexy," but his cases "illustrating the occurrence of pressure of the brain from serous effusion independent of inflammation" show that he could not free himself of the concept of "serous apoplexy."

small softenings of the brain at autopsy, "the brain resembling 'Parmasan' " (sic) cheese." The aortic and mitral valves were "very much thickened." Bright declared that the size of the softenings was related to the size of the diseased vessel.

In this description, we recognize TIAs (transient ischemic attacks), RINDs (reversible ischemic neurologic deficits), vascular dementia and lacunes.

Additional symptoms preceding apoplexy recorded by Bright were: headache, giddiness, migraine-like headaches, numbness left face, two or three attacks of hemiplegia, successive slight attacks of transient hemiplegia, affecting sensation more than motion, occasional vertigo and episodic incoherence.

Bright maintained that the location of disease in the brain or the blood vessels determined the nature of the symptoms. He furthermore suggested that the awareness of this fact would enhance diagnostic accuracy, which in turn was bound to improve treatment.

Unusual Cases

Bright recorded two unusual cases: Hemiplegia ipsilateral to the cerebral lesion and "tormenting pain" in paralyzed limbs that were deprived of sensation.

Bright's attempts at localization, which he believed was of importance for accurate diagnosis, represents a significant advance toward modern neurology.

Pressure Due to Extravasation of Blood

The subsection on intracranial hemorrhage begins with five cases "in which the effusion of blood has been found upon the surface of the brain." Here Bright gives excellent descriptions of the symptoms that characterize subarachnoid hemorrhage.

In one of these cases, a 19-year-old man "while sitting on the chamber utensil suddenly exclaimed, 'Oh my head.'" Bright found blood on the surface of the brain and a ruptured, partially clotted middle cerebral artery aneurysm. (See Figure 5a.)

The remainder of the cases in this section showed intracranial hematomas of various ages and a subdural hematoma. The arteries showed evidence of atherosclerosis (See Figure 5b), not only in older patients, but also in young apoplectics.

Bright noted severe bradycardia in a patient with a subdural hematoma and suggested that "it is by no means improbable that the pressure experienced by the brain during the existence of the coagulum…had some share in producing the retarded circulation."

A patient who suffered "successive paralytic attacks" and eventually reached a "state of imbecility" showed multiple

He was skeptical about the genuineness of signs ipsilateral to the brain lesion: "having once or twice nearly deceived myself by the imperfect accounts of friends in such cases, I am not willing to admit them hastily."

Treatment of Apoplexy

"It is impossible to remove a strong attack of apoplexy and not easy to remove a weak attack." (Hippocrates)

This Hippocratic aphorism did not deter physicians from trying to cure apoplexy, both strong and weak.

Although it was well known that some apoplectics survived without any treatment. Survival was usually credited to treatment, and it was often implied that death resulted when treatment was inadequate or withheld. This helped to perpetuate the belief in the effectiveness of the diverse interventions then in fashion.

"In the treatment of apoplexy, the most important point is the employment of bleeding; the judicious use of which powerful remedy the cure greatly depends." (Bright 1831, p 334)

Although the methods of treatment in the early 19th century were still based largely on surviving humoral concepts, Bright's rationale for abstracting blood was "a view of checking the hemorrhage," and the hope of reducing congestion rather than the restoration of a balance of the four humors. The supplemental maneuvers had the same rationale for Bright.

Whatever the rationale, the abstraction of blood was the recommended remedy for apoplexy and a nearly universal practice in Bright's time. Venesection or arterial section close to exsanguination, supplemented by the application of leeches, cupping, both wet and dry, were standard procedures in the treatment of apoplexy and for many other ailments. The pulse was monitored and abstraction was stopped when the pulse became depressed. Caution was advocated in the exsanguination of feeble individuals. The energetic bleeding that was practiced at that time must have lowered blood pressure for a time, and therefore might have reduced bleeding.

Blisters and Setons were used as additional supplements to bleeding. Purging was in regular use. The induction of vomiting was occasionally practiced but it was considered harmful by those who feared that the strain associated with vomiting may be harmful.

Bright used stimulants when "the patient grew cold" and "the pulse fluttering." He poured "vinegar down the throat, brandy if it could be procured" or "a few drops of compound spirits of ammonia to elicit cough that tended to rouse the patient." Cloth dipped in hot water was applied to the stomach. Cold cloths were "dashed on the temples and forehead with a sudden jerk," when the head felt hot and the carotids were throbbing. Frequently, the head was shaved, and cold applied to the shaven head.

Such therapy persisted throughout the 19th century, and bloodletting for stroke was not unknown in the 20th century. Few went as far as Thomas Sydenham, who stated: "I have consulted my patients' safety and my own reputation most effectually by doing nothing at all."

Summary

Bright showed that cerebral softening has many causes, one of which was a deficient blood supply caused by diseased arteries which like Abercrombie (p.25), he considered to be analogous to the gangrene of limbs.

Bright has shown that cerebral softening can be caused by thrombosis in the cerebral venous system. He also suggested that chronic illness and malignancy are risk factors for venous thrombosis. Bright also believed that venous obstruction contributed to thrombosis in his case of ovarian cancer. He thus came close to anticipating Virchow's coagulation triad (stasis, abnormal blood, diseased blood vessels).

The determination by Bright that cerebral softening was caused by a deficiency of blood supply represents a significant advance in the understanding of cerebrovascular disease.

Bright's description of the symptomatology of subarachnoid hemorrhages compares well with current accounts. His demonstration of a partially clotted aneurysm as a cause of an intracranial hemorrhage was one of the earliest observations of its kind.

Bright described TIAs and reversible ischemic neurological deficits (RINDs), and the lacunes that may result from them, and he recognized that dementia may be caused by multiple areas of cerebral ischemia. He further recognized that small lacunes were the result of obstructions of small arterial branches, whereas the obstruction of larger branches caused larger cavities. Although the realization that these were embolic came later, he did document carotid and valvular disease in a number of cases.

Bright associated bradycardia with intracranial hypertension.

He also gave a good description of intractable pain in pain paretic limbs with "destroyed sensation," now known as "the thalamic syndrome of Déjérine." He mentioned a case of paralysis ipsilateral to a cerebral lesion, but was hesitant to accept it as genuine.

Bright's attempts at localization, which he believed was of importance for accurate diagnosis, represents a significant advance toward modern neurology.

Richard Bright's observations on cerebral softening and apoplexy contributed to the current understanding of cerebrovascular disease and its division into occlusive and hemorrhagic strokes. •

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WFN Research Groups on Aphasia and Cognitive Disorders, and on ALS and MND

BY A. C. LUDOLPH AND THOMAS BAK

In June 2011, the World Federation of Neurology Research Group on Aphasia and Cognitive Disorders and the World Federation of Neurology Research Group on ALS and MND collaboratively organized Workshops on Amyotrophic Lateral Sclerosis and Frontotemporal Dementias in China and Mongolia.

Financed by the WFN, Facundo Manes, Thomas Bak, Suvarna Alladi, John Ravits and Albert Ludolph held lectures on the relationship of these two diseases, both on the neuropathological and clinical level. They were supported by colleagues from China and Mongolia, respectively.

In China, more than 200 professionals attended the meeting. The program raised alot of interest, and finally the two groups together with their Chinese colleagues organized a Local Network of Expertise. This includes developing a registry for ALS/MND in Beijing (Professor Liying Cui), which is mirrored by a registry for ALS/MND in Germany and potentially in Scotland. Currently, financial support is requested by the Chinese and German government.

Four days later, an educational course was held in Ulaanbaatar, Mongolia. It also was supported by our Mongolian colleagues and friends. The program was attended by more than 200 Mongolian neurologists. In the meantime, we have decided to establish a Local Network of Expertise in Ulaanbaatar, which mirrors the networks in Scotland and Germany. The Local Network of Expertise in Ulaanbaatar was established on Jan. 1, 2013, and the WFN will make every effort to support this project financially.

These most successful meetings show that the concept of the WFN to establish international scientific relations among physicians and basic scientists to hold teaching courses, to provide research groups a common bases and work together and finally establish Local Networks of Expertise is a most interesting future direction of clinical and basic research, which is doable and relevant for many fields. •

UNDERWATER

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system could be demonstrated. In the meantime, this method is established as a paradigm of fMRI to discover rest functions of conscious in post-coma states.

In the subdivision Underwater Neurology, a working group was established to introduce the scuba diving system in neurorehabilitation. Spasticity in mild spinal cord lesions and a disturbance of the vertebral spine can be successfully treated.

The hyperbaric oxygenation treatment (HBOT), until now called a stepchild, has the handicap to need high technical equipment with a specially trained crew. HBOT can be included in neurorehabilitation programs. Our group has initiated a cooperation with the Adeli Medical Center in Piestany, Slovakia. A treatment program to introduce HBOT for cerebral palsy and for patients with a vegetative state/apallic syndrome has been developed.

The program of the ARG Space and Underwater Neurology is focused on the research of the proprioceptive system and its disturbances. The main clinical project is the Bed Rest Syndrome in long-lasting bed lay conditions such as prolonged coma states as well as in chronic neurological diseases with reduced motoric activities. New methods in neurorehabilitation using stimulation of the proprioceptive system are in development. In HBOT, a cooperation with centers specializing in this method in neurological conditions is the goal. •

Recent Literature

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Struhal W, Mellgren SI, Grisold W. *Eur J Neurol.* 2013 Aug;20(8):e101-4. doi: 10.1111/ene.12177. No abstract available. PMID: 23829235 [PubMed - in process]

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Amy C. Lee, Jerome Chin, Gretchen L. Birbeck, James Bower, and Ana-Claire Meyer. May 28, 2013 80:2062-2064

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New Issue of *Revista Cubana de Neurología y Neurocirugía*
www.revneuro.sld.cu <http://www.revneuro.sld.cu/
The editors invite you to visit their web site to review articles and items of interest.

ADDITIONAL CANDIDATE FOR PRESIDENT: GUSTAVO ROMAN

Nominated under Article 6.3 of the constitution: www.wfneurology.org/cache/downloads/9zf2tk7klb4k8ccsskgswoso8/mem_ArticlesOfAssoc.pdf

Click here for candidate statements in the June issue.

CANDIDATE STATEMENT: PRESIDENT

Gustavo Román

My nomination as candidate for president of the World Federation of Neurology has been endorsed by the American Academy of Neurology and the Neurological Association of Colombia.

I was raised in a tropical Third World country in Latin America, educated as a neurologist at the Salpêtrière Hospital in Paris, France, and at the University of Vermont. These early experiences gave me a good background in global neurology. Fluency in Spanish, French and English — languages spoken by 2 billion collectively — has allowed me to communicate with many people and provided me with an appreciation for the cultural richness of their nations. Moreover, the practice of clinical neurology in academic centers in Colombia and in the U.S., in addition to international research collaboration in many parts of the world as director of neuroepidemiology at the National Institutes of Health (NIH), allowed me to develop a deeper understanding of the problems confronted by neurologists in many parts of the world.

WFN Involvement

I have been involved with the World Federation of Neurology (WFN) for more than 20 years, particularly with the education and research groups in neuroepidemiology, dementia and tropical neurology. I recently created the Environmental Neurology Research Group (ENRG).

For more than 15 years, I have been a member of the editorial board of *The Journal of the Neurological Sciences*, the official publication of the WFN.

In 2008, I began my three-year service as an elected trustee to the WFN Board of Directors under the current administration. I was re-elected in 2011 for a second consecutive term; thus, I have participated in all major policy and administrative decisions of the WFN for the past five years.

Throughout my career, I have been interested in numerous research topics ranging from tropical neurology, in particular nutritional problems in neurology, meningitis, herpes encephalitis, neurocysticercosis and tropical spastic paraparesis due to HTLV-1; to the neuroepidemiology of dementia and Parkinson's disease, stroke and vascular dementia; to recent studies of two modern epidemics: Alzheimer's disease and autism.

I am currently the scientific director and administrator of a large clinical and research Alzheimer's and Dementia Center in Houston, Texas, and have been successful in fundraising.

I hold an academic position as professor of neurology at Weill Cornell Medical College with involvement in the neurological education of medical students, residents and fellows, including an active observership international program.

Presidential Agenda

My presidential agenda can be summarized in the motto "Neurology for the 21st Century," emphasizing the need for widespread and novel use of communication technologies such as cellular telephones and web-based social media as a forum for collaboration, education, training and service including long-distance consultations (telemedicine); encouraging the provision of imaging and clinical neurophysiology equipment in places where neurologists are still deprived of these critical elements for the modern practice of neurology; supporting the translation and dissemination of educational and informational materials of the WFN from English into other languages as a way to improve communication among the member societies, trainees and fellow neurologists throughout the world.

I would seek sponsorship and multinational cooperation for neuroepidemiological studies: By facilitating the sharing of international databases, the WFN could allow researchers to analyze the public health implications of the main neurological problems in different parts of the world. I intend to reinforce the African Initiative launched by Johan A. Aarli, as well as Vladimir Hachinski's Latin American Initiative and Asia-Oceania Initiative. I will continue to enhance the WFN collaboration with the World Health Organization (WHO) and with other international neuroscience societies, particularly with neurosurgery specialists.

Background

Early in life, I learned that education is critical in order to overcome the limitations imposed by environment and economic restrictions. I believe that community education is also the answer to many of the neurological problems resulting from treatable risk factors such as hypertension, malnutrition, trauma and violence, among others. Therefore, public health practice and policy should become important tools for neurologists.

Increasing the number and educational level of neurologists worldwide by means of modern communication technologies must result in tangible benefits for the neurological health and care of all countries and their peoples. This presidential agenda would continue the legacy of my illustrious predecessors and enhance the name of the WFN in areas of the world where neurology is still a young specialty.

For a complete curriculum vitae, please visit **www.profgustavoroman.com**. •