WFN Takes Stock and Moves Forward

This, my second column, is to inform you of some important steps taken by the new administration and the rationale for these. They comprise the essence of the strategy meeting held Feb. 12-13 in London.

Such strategy meetings have been held from time to time previously. But due to the value of this strategy meeting, the trustees have decided it should become a regular biennial event for this administration. The World Federation of Neurology (WFN) was most fortunate that this meeting was attended by all of its elected representatives and the presidents or the representatives of the regional neurological organizations affiliated with the WFN.

These included Prof. Yomi Ogan, president of the newly formed African Academy of Neurology; Prof. Riadh Gouider, representing Prof. Chokri Mhiri, president of the Pan Arab Union of Neurological Societies; Prof. Marco Medina, president of the Pan American Federation of Neurological Societies; and Prof. Boon Soek Jeon, president of the Asian Oceanian Association of Neurology. We were also especially honored to have Prof. Ralph Sacco, president of the American Academy of Neurology, and Prof. Franz Fazekas, president-elect of the European Academy of Neurology and representing Prof. Gunther Deuschl.

Over two days, all WFN activities were discussed, evaluated, and had action plans developed to proceed for each. All such plans were carefully scrutinized by Prof. Richard Stark, WFN treasurer. While the WFN activities have been largely centered on education in neurology, the WFN must ensure that such programs are not only properly established with oversight and clear communication channels but they must be financially sustainable and have clear and measurable outcomes. Through the careful diligence, foresight, and enterprise of the strategy meeting attendees, we have largely attained this goal. It was with much pleasure that I was able to observe the enthusiastic contribution of all participants and a most successful outcome.

Here are the items that I believe to be of most interest to the membership.

Education

Regional Training Centers. There are five centers that are presently operating: four in Africa and one in Mexico. A proposition was received from Bangalore for which the WFN was most grateful.

The strategy meeting participants considered that the Asian proposition was different than that developed for Africa and required careful review by the Education Committee to clearly define the need.

Clean Air for a Healthy Brain

July 22 serves as World Brain Day 2018. Learn more about the initiative and the need for clean air.

Annual Academic Sessions Update

The Association of Sri Lankan Neurologists (ASN) held its 11th Annual Academic Sessions in November 2017 at the Cinnamon Grand, Colombo, under the theme of Neurology for Tomorrow. Prof. Raad Shakir, president of the World Federation of Neurology (WFN), was the chief guest at the Welcome Ceremony, and Prof. Man Mohan Mehndiratta, president of the Asia Pacific Stroke Organization (APSO), was the guest of honor. The Association of British Neurologists (ABN) was represented by an official ABN delegation.

Prof. Shakir delivered the opening plenary on global neurology challenges. The JB Peiris Oration was delivered by A/Prof. Udaya Seneviratne from Monash University in Melbourne, Australia. The overseas faculty consisted of 19 speakers from Australia, India, Pakistan, Singapore, the United Kingdom, and the United States, and was complemented by the local faculty. The academic program spanned three days and had a strong emphasis on new advances in neurology.

Two half-day symposia were held on
We are pleased to welcome you to the March–April 2018 issue of World Neurology, the official publication of the World Federation of Neurology (WFN). In this issue, a number of WFN initiatives are discussed, beginning with the Presidents’ Column where WFN President William Carroll discusses the new steps taken by the new administration of the WFN as outlined at the recent strategy meeting that took place in London.

In this issue, we are also pleased to announce the seventh year that the WFN is offering educational grants to sponsor high impact educational and outcome-based research projects. Interested young investigators should waste no time as the deadline for applications is quickly approaching. Another important announcement in this issue is the invitation for bids from national member societies in the Americas to host the World Congress of Neurology (WCN) in 2023.

The theme for this year’s World Brain Day (July 22, 2018) campaign is also announced in this issue and all neurologists and societies are encouraged to participate.

John D. England, the editor-in-chief of the Journal of the Neurological Sciences, the official journal of the WFN, announces a special issue devoted to tardive dyskinesia, edited by Dr. Daniel Truong and Dr. Robert Hauser. It is available free online for all readers through 2018. Dr. Udaya K. Ranawaka reports on the 11th Annual Academic Sessions of the Association of Sri Lankan Neurologists that was held last November. Professor Jan Kuk announces the next examination of the European Board of Neurology that will be taking place on June 15, 2018, at the European Academy of Neurology Congress in Lisbon. Martin Kaddumukasa, MD, reports on his eye opening visit to St. Josef Hospital in Cochem (University Clinic of Ruhr University) in the department visit program sponsored by the German Neurological Society and the WFN.

In this issue’s history column, Douglas Lanska reports on his interview with Nobel laureate Stanley Prusiner on the origin of the term prion, an article that should be of both historical and medical interest to all readers. Eduardo Wilson provides a biography of Victor Soriano, who is honored by the Soriano lectures held every two years at the World Congress of Neurology. Finally, Nadir Bharucha provides a touching obituary of Professor Eddie Phiroz Bharucha, a pioneer of neurology in India, who passed away in December and whose name will also live on in an endowed lectureship at the World Congresses of Neurology.

We hope you enjoy this issue, and we invite articles from neurologists around the globe to keep us all up to date about news of interest to all neurologists. •

## SRI LANKA

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Jan Kuk announces the next examination of the European Board of Neurology that will be taking place on June 15, 2018, at the European Academy of Neurology Congress in Lisbon. Martin Kaddumukasa, MD, reports on his eye opening visit to St. Josef Hospital in Cochem (University Clinic of Ruhr University) in the department visit program sponsored by the German Neurological Society and the WFN. In this issue’s history column, Douglas Lanska reports on his interview with Nobel laureate Stanley Prusiner on the origin of the term prion, an article that should be of both historical and medical interest to all readers. Eduardo Wilson provides a biography of Victor Soriano, who is honored by the Soriano lectures held every two years at the World Congress of Neurology. Finally, Nadir Bharucha provides a touching obituary of Professor Eddie Phiroz Bharucha, a pioneer of neurology in India, who passed away in December and whose name will also live on in an endowed lectureship at the World Congresses of Neurology.

We hope you enjoy this issue, and we invite articles from neurologists around the globe to keep us all up to date about news of interest to all neurologists. •

## New Committee Chairs

Nominating Committee
Constitution and Bylaws Committee
Finance Committee
Regional Liaison Committee
Publications Committee
Public Awareness and Advocacy Committee
Education Committee
Standards and Evaluations Committee
Membership Committee
Applied Research Committee
Congress Committee
E-Communications Committee

Prof. Hidehiro Mizusawa
Prof. Phil Smith
Prof. Bo Norving
Prof. Ralph Sacco
Prof. John England
Prof. Tissa Wijeratne
Prof. Steven Lewis
Prof. Jan Kuk
Prof. Morris Freedman
Prof. Albert Ludolph
Prof. Ryuji Kaji
Prof. Walter Struhal

## World Congress of Neurology (WCN)

The Scientific Program Committee and Teaching Course Committee for the 2019 WCN, to be held in Dubai, will meet during the upcoming AAN meeting in Los Angeles. Under Prof. Chris Kennard and Prof. Steven Lewis, the program development is ahead of schedule.

We all remember the wonderful 2015 WCN held in Santiago, Chile. Notices have gone out to member national societies asking for nominations for the 2023 venue. In this year, the WCN is again scheduled to be hosted in the Americas. This WFN region encompasses North America (Canada and the U.S.), Central America, and South America.

Junior Traveling Fellowships

Applications closed after the receipt of 82 requests for some of 30 JTFs, each valued at GBP1,000. Applicants will be advised of the results shortly.

Grants

It was determined at the strategy meeting that these should be more focused and targeted with two principal aims. First, to provide young neurologists with the opportunity and funds to undertake a piece of original research. Second, that the research would result in both a publication for the author and provide data with which to launch a larger project or direct local resources to areas of need. Six grants of up to U.S. ($ 25,000) to a maximum total of U.S. ($ 100,000) will be available this year. For more details, please refer to the grant announcement on page 5 of this issue of World Neurology.

**PRESIDENT**

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goals, location, collaborative organization, and the funding and outcome measures before proceeding. It is hoped this review will be completed quickly.

Regional Teaching Courses

These are predominantly held in Africa at the present time through a collaboration of the EAN, WFN, and specialty groups, such as the WSO, the MDS, and this year ECTRIMS. One proposition that was considered to have some merit was the linking of every second regional teaching course in Africa with the African Academy of Neurology.

The African Academy of Neurology is of fundamental importance, and this nascent but most essential development may require its organizational structure to be nurtured for the time being. Having a formal relationship in place facilitates its growth.

**FROM THE EDITORS**

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

**Stanley Prusiner on the Origin of the Term Prion**

**BY DOUGLAS J. LANSKA, MD, MS, MPH, FAAN**

In an oral history interview for the American Academy of Neurology conducted April 27, 2017, at the Boston Convention Center, I spoke with Nobel laureate Stanley B. Prusiner, the only living neurologist to have won a Nobel Prize (Lanska and Klaffke, 2017, Lanska, 2017).

Prusiner was the sole recipient of the Nobel Prize in Physiology or Medicine in 1997 “for his discovery of Prions — a new biological principle of infection.”

Here is an excerpt from that interview concerning how Prusiner created the term prion, which he introduced in a landmark paper in Science in 1982 (Prusiner 1982).

**Prusiner:** [In the fall of 1980,] I was with a friend of mine who was a professor at Harvard. This was [American chemist] Frank Westheimer, PhD (1912-2007). [He was receiving] an honorary professorship in the pharmacy school. He came to the Bronx and we talked. I went over everything I was doing. He said, “Stan, this is really fantastic. You’ve discovered something really new, and you need to give it a name, and you need to give it a good name. You need to think about this name for a long time. A lot of work needs to go into this. Because, if you give it a crappy name, someone else will come along and give it another name, and they will end up with the lion’s share of the credit, but you will have done the work, and that’s not a good idea. This is what you’ve done with your life, and you need to make sure that you don’t screw it up. So you need to spend a lot of time on this.”

**Lanska:** Could you talk to us about how you came up with the term?

**Prusiner:** OK, I’m happy to recite this… [It’s the spring of 1981, and I need to finish this paper] [Prusiner 1982]. The only thing holding it up is the word, and I’m trying to figure out a word. So I go through Latin dictionaries, because I knew — I still know — a lot of Latin. I’m not a scholar in it, that’s for sure. I don’t know any Greek. I don’t really know how to come up with a word. I want a word like exon. I thought that’s a great word. Where do I find somebody who can do that? I kept thinking of somebody at Berkeley [who] can help me, but then I didn’t even know who to talk to. I thought this is going to be just frivolous to go to Berkeley and try to find some professor of words who will help me.

Then, I said, “OK, I’ve got to come up with some rational approach to a word, just taking a bunch of letters, and where are these letters going to come from? Well, they’re going to come from words that have something to do with the responsible agent.” So I wrote out the words protein, infectious, and agent. I started with that. I got piaf out of that, because I wanted protein, and I wanted infectious, and then I wanted agent.

**Lanska:** You just kind of throw on an extra “f” for fun?

**Prusiner:** For infectious.

**Lanska:** Protein, infectious, agent… p-i-a. You added an “f.”

**Prusiner:** So you just underline the “f” in infectious, right? That’s where the letters all come from.

I always liked [French cabaret singer and songwriter] Édith Piaf (1915-1963; nee Édith Giovanna Gassion; she adopted her stage name, Piaf, from her nickname, which is French slang for sparrow). Now, “sparrow” is announcing all of this, right? [Prusiner laughs.]

I then sent it to a friend of mine named Sidney Udenfriend (1918-2001), an American biochemist and pharmacologist who was running the Roche Institute in Molecular Biology. This was a fabulous place that was created by Roche to do basic science that would create drugs. Eventually, they shut it all down, because they never got one drug out of spending hundreds of millions of dollars over 20 years. He reads the paper, and he says, “Stan, this is an American discovery, not a French discovery. You don’t need a French word. You need another word. Go find another word.” So that was the end of piaf.

Short. You need something short. You need to have two vowels. Great words are words like virus. That’s a fabulous word. And quark [pronounced kwark] is a great word. Those are words that I think are just A+.

So I then throw out agent, because I don’t need agent. That’s totally non-specific, and I’m left with protein and infectious. Whenever I would go to a lecture, I would write out infectious across the top and protein on the side, or vice versa. Then, I’d just pick letters randomly I didn’t get anywhere until one day. I’d probably stumbled across the same word 10 times and never picking it.
You’ve discovered something really new, and you need to give it a name, and you need to give it a good name.

Frank Westheimer

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out: p-r-i-o-n, I read it, and I say, “This is prion.” I could have pronounced it pry-on, but I pronounced it pre-on. Then, I said, “I’m going to write p-r-e-e-o-n as the pronunciation in parentheses.”

I leave this defunct faculty club that was now a sandwich shop across the street, and I walk upstairs. I look in my Webster’s Unabridged Dictionary, because there are no computers. I find a bird with a sawtooth beak.

Lanska: A whalebird.

Prusiner: Right. And I said, “Well, you know, this really doesn’t matter. Lots of words have more than one meaning. There’ll be two pronunciations. If I’m right, this will be the No.1 definition, and the bird will continue to live on in oblivion, because no one is interested in prions [pry-ons]. I’ve never heard of a prion [pry-on]. It’s a petrel that lives in the south, the Southern Ocean [Antarctic Ocean].”

It’s not worth worrying about the bird. I said, “There’ll be a little crap from some of my competitors who will say, ‘That’s a bird.’” But I said, “It doesn’t matter.” So that’s where it came from. It had ion, so it looked like it was something highly basic. An ion really gets right down to the essence. And it was short. It had two syllables. It was going to be OK.

Lanska: Now, of course, proteinaceous infectious gets you prion rather than prion...

Prusiner: Right, which is like loin.

Lanska: Which has kind of a funny sound to it, of course, no matter how you pronounce it. So you made another, little flexible change in that, just to give it a more catchy flavor, I think. Is that fair?

Prusiner: Yes. Proin is not a good word.

Lanska: But proteinaceous infectious as an acronym would get you that, right?

Prusiner: Yes.

Lanska: A lot of people didn’t like the term.

Quark: What’s in a Name?

P rusiner is certainly not alone in devoting considerable energy to devising a catchy word for a newly described entity in science or medicine, and indeed he developed exemplars based on prior scientific neologisms. Later, in the public interview, Prusiner recalled:

My model words [for prion] were virus and quark [pronounced correctly as kwark]. I thought Murray Gell-Mann was terrific with that, stealing that from Lewis Carroll [sic]. So I looked through Alice in Wonderland for another one, but I didn’t find one.

American physicist Murray Gell-Mann (1929-) received the 1969 Nobel Prize in physics “for his contributions and discoveries concerning the classification of elementary particles and their interactions.”

Gell-Mann coined the term quark (which he pronounced kwork) in 1963 to refer to the fundamental constituents of the nucleon (i.e., either a proton or a neutron, considered in its role as a component of an atomic nucleus) (Gell-Mann, 1964, 1995). Despite Prusiner’s recollection to the contrary, the term quark did not originate in the fantasy novel Alice’s Adventures in Wonderland (1865), written by English mathematician Charles Lutwidge Dodgson (1832-1898) under the pseudonym Lewis Carroll.

Instead, Gell-Mann derived the non-phonetic spelling from a whimsical poem in Finnegans Wake (1939) by Irish writer James Joyce (1882-1941).

According to Gell-Man’s account (1995): In 1963, when I assigned the name “quark” to the fundamental constituents of the nucleon, I had the sound first, without the spelling, which could have been “kwark.” Then, in one of my occasional perusals of Finnegans Wake, I came across the word “quark” in the phrase, “Three quarks for Muster Mark.” Since “quark” (meaning, for one thing, the cry of the gull) was clearly intended to rhyme with “Mark,” as well as “bark” and other such words, I had to find an excuse to pronounce it as “kwark.” But the book represents the dream of a public figure named Humphrey Chimpden Earwicker. Words in the text are typically drawn from several sources at once, like the “portmanteau” words in Through the Looking-Glass [and What Alice Found There (1871), the novel by Lewis Carroll]. From time to time, phrases occur in the book that are partially determined by calls for drinks at the bar. I argued, therefore, that perhaps one of the multiple sources of the cry, “Three quarks for Muster Mark” might be “Three quarts for Mister Mark,” in which case the pronunciation “kwork” would not be totally unjustified. In any case, the number three fitted perfectly the way quarks occur in nature. (Gell-Man, 1995, p. 180)

Joyce’s line struck Gell-Mann as particularly appropriate, because the hypothetical elementary particles combined in groups of three to form baryons, such as protons and neutrons.

Gell-Mann adopted Joyce’s spelling for his “quark,” even though Joyce clearly intended quark to rhyme with Mark.

An equivalent model to Gell-Mann’s quark model was independently proposed by Russian-American physicist George Zweig (1937-) in 1964 (Zweig 1964a,b), the same year as Gell-Mann’s model, but Zweig did not propose a similarly catchy term and ultimately Zweig did not share the 1969 Nobel Prize in Physics.

Both Prusiner and Gell-Mann described or proposed new entities that warranted new scientific nomenclature. Both saw the new names as important factors in establishing and cementing the names of their terms, both chose idiosyncratic non-phonetic pronunciations and repeated them to the public interview, Prusiner recalled:

If Prusiner’s and Gell-Mann’s later experiences are any guide, Westheimer’s advice to Prusiner was certainly prescient: The names of newly described scientific entities do matter in establishing and maintaining scientific turf.

Although Lewis Carroll’s Alice character was not the source of either neologism, she might still have had something to say about this if she had been consulted: “Curiouser and curiouser!”

Prusiner: You wrote in your book, though, that one of the reviewers of your paper objected, that the name had unfortunate echoes of the author’s name, Prusiner ions (Prusiner 2014, pp. 90-91).

Prusiner: Yes. That was pretty clever, [but] there was so much vitriol in the rest of the review.

Lanska: Now, of course, proteinaceous infectious gets you prion rather than prion...

Prusiner: Right, which is like loin.

Lanska: Which has kind of a funny sound to it, of course, no matter how you pronounce it. So you made another, little flexible change in that, just to give it a more catchy flavor, I think. Is that fair?

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Lanska: But proteinaceous infectious as an acronym would get you that, right?

Prusiner: Yes.

Lanska: A lot of people didn’t like the term.
GRANTS-IN-AID

2018 Call for Applications for Grants

To further its mission to “foster quality neurology and brain health worldwide,” the WFN is offering up to six grants of $25,000 with a maximum spend of $100,000. To see the complete rules and regulations for the 2018 grants, The WFN has been offering grants since 2011. For the list of prior grantees and reports, click here.

To download Grants in Aid 2018 Rules and Regulations click here.

Eligibility
Young neurologists, less than 10 years from graduating in neurology from WFN Member Societies are eligible.

Preference will be given to residents in areas of World Bank low/low-middle-income countries.

The WFN wants to fund low-cost, high-impact educational and outcomes research projects. International cooperation is encouraged with a priority on low-income countries.

Note: Projects to provide routine health care and fund ongoing research proposals are not eligible.

Criteria
Projects should be in education, improvement of services (regional or national) or scientific, and require the collection of data to test a hypothesis.

Each grant will have to satisfy its terms of agreement. (See below.)

In the application, address the following points:

Relevance: How does the project directly address the mission of the WFN?

Value: What is the return on invested effort in funds and/or time?

Viability: Is this a time-limited project with a measurable outcome or is it an initiative that will grow and support the development of further research or care?

Synergy: Will this enhance interaction within and between the WFN and among committees, initiatives, and task forces, with outside partners, governmental and non-governmental organizations, the World Health Organization (WHO), and fundraising agencies?

Please suggest possible partners. For example: A project on stroke would probably be interesting for the World Stroke Organization (WSO); epilepsy possibly with the International League Against Epilepsy (ILAE).

Evaluation: How will the research outcome be measured? Outcomes and goals should be defined in the application.

Management: Good governance, transparent monitoring, and clear interim and financial reports are required.

Co-Sponsored Grants
The WFN encourages co-sponsored grants. These grants will be co-sponsored by the WFN and a partner organization. The partner organization can be a scientific society, such as ILAE or Movement Disorder Society (MDS), a regional society, or a national society. The partner organization will sign a sponsorship agreement with the WFN to define the shared costs and the role of the individual partners in this project.

Project responsibility and reporting will be shared by the WFN and the partner organization.

Deadlines
• Application due by June 20, 2018.
• Applicants notified of results by July 31, 2018.
• Applicants informed of final results by Oct. 3, 2018.
• Funding of successful applicants begins as soon as it can be arranged thereafter.
• Applications are exclusively submitted using the WFN grant application and should include the following:

Application Checklist
• The name of the sponsoring group and lead applicant with curriculum vitae
• Title of the project
• Description of the project
• Direct relevance of the project to the mission of the WFN
• Viability of the project
• Timeline of the project, dates and duration
• Detailed budget in U.S. dollars
• Bank electronic funds transfer with confirmation of the same by that bank
• Vorum of the local ethics committee

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Institute, in which he says:

“The fourth decade of my association with scrapie ended in 1978, with the causal agent still obscure, and virologists as adamant as ever that theirs was the only worthwhile point of view. To explain findings that did not fit with a virus hypothesis, they rechristened the causal agent an ‘unconventional virus.’ Use of this ingenuous cover-up made ‘virus’ meaningless — for is not a cottage an unconventional castle?”(Pattison, 1988)

References:
• Anonymous. What Does ‘Quark’ Have to Do with Finsen’s Wake? How a word used by James Joyce became the name for an elementary particle of matter. Merriam-Webster, 2017. https://www.merriam-webster.com/words-at-play/quark
• Lanksa DJ, Stanley Prusiner, MD. FAAN. American Academy of Neurology Oral History Archive Public Interview. 69th Annual meeting of the American Academy of Neurology, Boston, Massachusetts; April 27, 2017.

WFN Invites Bids to Host WCN 2023

The World Federation of Neurology is pleased to invite bids to host the World Congress of Neurology (WCN) in 2023 from national member societies in the Americas.

If your national society would like to be a candidate to host WCN 2023, please write to the WFN Headquarters Office at the address below to express your preliminary interest by July 31, 2018.

World Federation of Neurology
Chester House
Fulham Green
81-83 Fulham High Street
London
SW6 3JA
United Kingdom
email: info@wfneurology.org
You will be sent an application form to complete and return by Sept. 18. All applications will be treated in confidence and will be reviewed by the WFN to draw up a short list of possible venues. Those that are short-listed will be notified by mid-December 2018, and a site visit by WFN officers to evaluate the proposed program and facilities on offer will take place in the ensuing three months. A report and recommendation will then be submitted to the Council of Delegates meeting during the WCN 2019 in Dubai, United Arab Emirates, where the final vote will occur.

The WFN looks forward to hearing from any member neurological society that wishes to be considered as the host of WCN 2023.

References:
Douglas S. Lanksa is associate chief of staff for education at the VA Medical Center, in Tamah, Wisconsin. He is also professor of neurology at the University of Wisconsin School of Medicine and Public Health in Madison, Wisconsin, and professor of psychiatry at the Medical College of Wisconsin in Milwaukee, Wisconsin and the chair of the History and Archives Committee of the American Academy of Neurology.
The theme for this year’s World Brain Day was carefully selected to raise awareness of the influence of air pollution on neurological diseases. We hope that this campaign will follow the success of previous World Brain Day campaigns and will touch an emerging, but equally important issue, which is the role of pollution and neurological disease.

In recent times, the effects of air pollution on our health has attracted increasing interest with international institutions providing growing mortality and morbidity data. The latest estimation of deaths attributable to air pollution worldwide is 9 million deaths annually. These deaths are related to cardiac diseases such as myocardial infarction or congestive heart failure, and neurological events such as stroke, lung diseases, and cancer. Stroke notwithstanding, the suspected impact of pollution and neurological disease.

What Is Air Pollution?

Air pollution is a global and diffuse contamination by noxious bio-aerosols (pollen, germs, and toxins) and chemical compounds (manmade or of natural origin). Mostly long-term exposure to relatively high levels of certain chemicals in workplace air has resulted in many examples of nervous system damage over the past century.

In addition to air pollution, occupational and residential air pollution is emerging. An example is the exposure to chemotherapy and metabolites in hospital personnel and the biologic circle resulting in contamination of surface water.

Which Are These Pollutants?
The chemical nature of environmental pollutants is complex and variable. Some gases (carbon dioxide and methane) are emitted into the atmosphere naturally from the decay of organic waste. Many are entirely manmade.

What Are the Sources of the Pollutants?
Although there are some natural sources of air pollution such as volcanic eruptions and fires, most can be attributed to human activities. The major source derives from widespread reliance on combustible fossil fuels for energy needed by industries, transportation, and temperature control (both heating and cooling). Other human activities, such as agriculture practices, livestock, and deforestation, are important additional sources.

Impact on Brain Health
Recent publications have shown evidence for air pollution as a stroke risk. The recent Global Burden of Disease study, for example, has investigated data from 1990 to 2013 in 188 countries. It demonstrated that air pollution contributes to up to 30 percent of the burden of stroke. The adverse effects of air pollution are most important in low- and medium-income countries and for vulnerable patients with other vascular risk factors or a prior history of stroke.

Stroke is the leading cause of motor disability; the second cause of death in people older than 60 years, one of the main reasons for hospitalization, and a risk factor for dementia.

The list of possible air pollution and environmental pollution adverse effects is increasing. Neurodevelopmental disorders and neurodegenerative diseases, and possibly also neuroinflammatory diseases, are discussed among others as having a potential association to polluted air.

Awareness
Air pollution and environmental pollution is a potentially modifiable risk factor for some cerebrovascular and neurodegenerative diseases. The dogma has changed: Prevention is definitely not only an individual concern but must be considered at the societal level. This enlarging worldwide public health problem requires environmental health policies to reduce air pollution to protect brain health and not only lungs.

Next Steps
WFN material for the World Brain Day has been developed and will be sent to member neurologic societies. If you have any queries and suggestions, contact us at wbd2018@wfnneurology.org.

We look forward to many activities around the 2018 World Brain Day!

Mohammad Wasay is the WBD committee chair.
Wolfgang Grisold is the WFN secretary general.
Next European Board Examination in Neurology

By Prof. Jan Kuks

The next Exam of the European Board of Neurology (EBN) will take place on Friday, June 15, 2018 at the EAN congress site in Lisbon.

Prof. Wolfgang Grisold from Vienna successfully started this annual event in 2009. This year, we celebrate the 10th examination.

Every year, the number of participants increases. We receive a lot of mostly positive feedback from our candidates, which makes it possible to improve the exam continuously. Many young neurologists consider taking this exam to aid them while preparing for the written tests and writing their contributions for the oral exams.

Participating in the EBN exam is not merely a way of showing success in retrieving information accumulated during training and reading literature, but more than that a demonstration of the ability of sound reasoning, presenting insight and working with accessible knowledge. Candidates are allowed to use external reference sources and prepare work at home that will be judged – and can be modified after personal feedback – before they come up for the real exam.

They can update and expand their knowledge and abilities, take part in a unique academic experience, and get an additional sign of excellence. Thus, they show their commitment for life-long learning. Although the EBN exam has no legislation until now, the title “fellow of the European Board of Neurology” (which does not coincide with “fellow of the EAN”) may enhance the candidate’s possibilities to work in other countries within and outside Europe.

For the next years, the collaboration between EBN and EAN will be intensified in a great way. Using more technical possibilities to work in other countries, especially those who are already practicing.

We sincerely hope to get more European candidates, not only junior neurologists, but also those who are already practicing. •

Prof. Jan Kuks is the chair of the EBN examination committee, and works at the University Medical Center Groningen in the Netherlands.

Editor’s Update

For many years, tardive dyskinesia was a poorly understood clinical syndrome with no effective therapy. Thanks to new research, we now have a greater understanding of the pathophysiology of tardive dyskinesia and new therapies for the condition.

A summary of this new and important information about tardive dyskinesia is now available in the Journal of the Neurological Sciences. I am pleased to announce that a special issue on Tardive Dyskinesia, edited by Drs. Daniel Truong and Robert Hauser, has been completed as volume 389 (June 15, 2018) and is available on the website for the Journal of the Neurological Sciences.

Importantly, the special issue will be “free access” via the online journal site through the year 2018. Elsevier has added a special link via the online journal site called “SI Vol 389, 2018” under the tab “Free Articles” to enhance accessibility.

The special issue is also available on ScienceDirect. I encourage all of you to access this issue, which is currently the most up-to-date monograph on tardive dyskinesia. Its publication is especially timely since there are new medications and other new treatments for the condition.

I would like to take this opportunity to thank Drs. Truong and Hauser and all of the invited authors of this special issue for their outstanding contribution to the Journal of the Neurological Sciences and the medical and scientific community.

Also, I would like to acknowledge Peter Bakker, our executive publisher at Elsevier, for helping us arrange free online access of this series of articles for the remainder of the year. •
Victor Soriano
The Soriano Lectures at the World Congresses of Neurology were named for his contributions and lasting presence

EDUARDO WILSON

Victor Soriano was born on Feb. 8, 1909, in the Isle of Rhodes. At the time, the Isle of Rhodes was under the possession of Turkey, and soon after of Italy. Victor was the second of five siblings. His parents were Félix Soriano and Catalina Junio, both Sephardic Jews. They emigrated to Uruguay when Victor was 9 months old. This explains why Victor considered himself Turkish, Italian, and Uruguayan.

Once in Uruguay, the Soriano family settled in its capital city, Montevideo, in the historical district, where Victor chose to live the rest of his life. His father, an efficient and respected tailor, soon became popular among the Jewish community. His income quickly increased, and he gained a deep and lasting admiration. In 1947, as visiting investigator of the Rockefeller Institute for Medical Research, he worked with Prof. Hiram Houston Fulton, Sterling professor of physiology, who appointed him instructor of physiology. Fulton inspired in Victor a deep and lasting admiration. In 1947, as visiting investigator of the Rockefeller Institute for Medical Research, he worked with Prof. Hiram Houston Merrill at the Montefiore Hospital of Columbia University. Since 1948, he attended with Clarita all of the meetings of the American Neurological Association (ANA). In 1950, he was named delegate for Uruguay to the Iberoamerican College of Neurologists. Victor and Clarita were regular attendees to the International Congresses of Neurology from the initial preparatory meeting in Lisbon in 1953 and the first official congress held in Brussels in 1957.

At the congress held in Rome in 1961, Earl Walker of Baltimore, Giuseppe Moruzzi of Pisa, and Victor of Montevideo paid tribute to the memory of John F. Fulton, who had died the previous year. At that meeting, Fulton’s friends and collaborators decided to organize the Fulton Society, and Victor was elected as permanent president. This society commended its president to organize a special symposium, every two years, simultaneously with the World Congress of Neurology and the ANA meeting, where selected leaders of neuroscience should give lectures on advances in nervous system research. The first of these symposia was held in Atlantic City in 1965 and continued for many decades, sponsored by the World Federation of Neurology (WFN) and the ANA and organized by Victor and Clarita.

In 1987, Victor and Clarita decided to sponsor a lectureship to be given at the ANA, after 40 years of consecutive attendance to its meetings. The lecture must be given by a member of the ANA. When asked in 1989 why they chose to sponsor a lectureship, the Sorianos answered: “When we first went to the United States in 1945, to stay with Prof. John F. Fulton and afterward with Prof. H. Houston Merrill, we enjoyed the most cordial and warm welcome everywhere, establishing lasting bonds of friendship with outstanding promising young doctors, who are now senior members of the American Neurological Association.”

During his last four decades, he devoted much of his time to medical journalism, publishing in the most important newspapers of Uruguay weekly columns on different subjects: sanitary education, innovations in medicine, historical aspects of medical practice, with the intention of popularizing and simplifying medical knowledge.

DEPARTMENT VISIT UPDATE

Neurology Training at St. Josef Hospital in Bochum

BY MARTIN KADDUMUKASA, MD

Training Dates: Nov. 6-Dec. 4, 2017

The overall objective of my neurology department visit was capacity-building and strengthening of basic skills training in integrated management of essential emergency care in stroke, other neurologic conditions, and procedures at Ruhr University Hospital for Neurology.

Specific Objectives

I trained in the use of the “Integrated Management Package on Stroke Emergency and Essential Stroke Care.” This included thrombolysis, exposure to new techniques and treatment modalities, specialist for education, and existing training programs. The training allowed me to improve knowledge and professional skills in stroke care in the five selected areas: neuroimaging, thrombolysis, inpatient care, transcranial Doppler scanning, and intensive care.

Achievements

This training exposed me to the following neurology areas to which I hadn’t been exposed before:

- Multiple sclerosis care and management
- Intrathecal treatment options for MS
- Intensive care patient nutrition
- Use and interpretation of ICU monitors
- Management of seizures in stroke
- Thrombolysis
- Stroke diagnosis via transcranial Doppler scan

From the training, I am able to identify the gaps in stroke care protocols in Uganda from emergency patient assessment with international assessment scale, timely patient management, active rehabilitation, and 24-hour patient evaluation.

Acknowledgements

Special thanks to World Federation of Neurology and German Neurological Society for funding this training fellowship. In addition to the head of the neurology department, Prof. Dr. Med Ralf Gold, head of stroke and intensive care unit PD Dr. C. Krogius and all staff of Bochum Hospital.
Eddie Phiroz Bharucha, though born into privilege, was in many ways a self-made man. His mother, Bachha came from a prominent business family in Karachi. His father, Phiroz C. Bharucha (1882-1952), was an eminent physician in Bombay (now Mumbai) who was consulted by M.K. Gandhi and Mohammed Ali Jinnah.

PC. Bharucha was part of the group of highly qualified Indian physicians who vigorously pushed their claim for academic positions in Grant Medical College on par with the British members of the Indian Medical Service. Their efforts for justice resulted in the formation of a medical college, which facilitated academic advancement of Indian doctors as a matter of policy.

After Eddie’s mother died when he was 2, his bereaved father immured himself in his work and left Eddie to be brought up largely by an English governess, with occasional inputs from his mother’s family. Eddie completed his MD in both Bombay and London. He was appointed Honorary Physician in Medicine at the King Edward Memorial and Seth G S Medical College (KEM) Hospital in 1945.

Between 1949 and 1952, he trained in neurology at the Hospital for Nervous Diseases, Queen Square and the Maid Vale Hospital for Nervous Diseases in London. He then proceeded to the United States where he worked for three months each under Dr. Houston Merritt at Columbia University and under Dr. Denny Brown at Boston City Hospital. He returned to India in 1952 and became the first neurophysician to establish a department of neurology in India, with 12 beds at the KEM Hospital in January 1953.

By the time he retired, as emeritus professor in 1974, the KEM Hospital had all of the core elements of the clinical neurosciences, including large epilepsy and neurology outpatient clinics which drew and still draws a large number of patients from all over the country, as well as neuroradiology, electroencephalography and electromyography. The department of neurology had now established a reputation nationally and internationally for excellence in patient care, teaching, and academic endeavors. Dr. Bharucha later joined the Bombay Hospital, a large private hospital which also has a strong sense of social responsibility, and which subsequently became a teaching hospital. Together with his wife, the late Dr. Piloo Bharucha, he promoted and practiced multidisciplinary care in pediatric neurology long before this became entrenched in more developed economies.

From the mid 1950s onward for many years, the couple ran clinics for neurological and pediatric assessment of children with poliomyelitis and cerebral palsy at what was formerly the Children’s Orthopedic Hospital. He also played a pivotal role in establishing the Spastics Society of India (now ADAPT, or Able Disabled All People Together).

Positions held domestically included co-founder of the Indian Epilepsy Association, membership of the Neurological Society of India (he was president in 1961), the council of National Academy of Medical Sciences, inspector of the Medical Council of India, examiner for the DM (Doctor of Medicine) and DNB (Diplomate of National Board) exams throughout India, Honorary Lieutenant Colonel in the Armed Forces and physician to the Reserve Bank of India. He received the Dhanvantari Award in 1991 for his outstanding contributions to medical sciences, in particular in the field of neurology.

Overseas, he was the president of the World Congress of Neurology (1989), vice president of the World Federation of Neurology (1969-1973), honorary member of the Association of British Neurologists, special member of the International Cerebral Palsy Society, and honorary member of the American Neurological Association.

His research and publications pertained to stroke, neurological infections (tuberculous meningitis, postconvulsively myeloradiculopathy), nutritional disorders (especially the relationship between vitamin B, malnutrition, and chronic alcoholism), toxic disorders (lathyrism and mass screening of those exposed to toxic gas in Bhopal within a week of the tragedy), congenital abnormalities (atlantoaxial diastasis), and epilepsy and epidemiology of neurological diseases in the Parsi community. He was on the editorial advisory board of the Handbook of Clinical Neurology (eds. P.Vinken & G.Bruyn, 1973 onward).

Dr. Bharucha was a consummate physician who relied on clinical assessment rather than imaging studies. Notwithstanding his academic achievements and his work to advance the practice of neurosciences, his primary concern always remained the best interests of his patients. This, combined with his deep empathy (particularly toward the under-privileged) and an ingrained sense of social responsibility, led to his involvement in several projects aimed at alleviating the stigma and distress suffered by those with neurological disorders. One example of this was the 12-year campaign that he led which ultimately led to the repeal of a law that deemed people with epilepsy to be insane. Another was his importing (at his own expense) of an early EEG machine for the KEM Hospital, part by part. He also imported (again at personal expense) medicines for patients that were not available in India at that time, such as diphenylhydantoin for a patient with Wilson’s disease. Finally, his contributions during the riots of Partition, in 1947, should be mentioned. He was among a group of doctors from the KEM Hospital that went to Lahore, where they provided medical relief. Using the Sir Gangaram Hospital as a base, they visited various refugee camps, escorted by troops from the Gurkha regiment. The trip was organized by Lady Edwina Mountbatten and Dr. Jiwraj Mehta.

He was a man who, by virtue of character and example, came to fulfill many roles for many people – clinician, teacher, mentor, friend, husband, father, and grandfather. Piloo and he had three sons – Nadir, Manek-Phiroz, and Adil, eight grandchildren and two great-grandchildren. In 2004, his students, friends, and family created the Eddie and Piloo Bharucha Fund at the World Neurology Foundation to support a perennial named lectureship at the World Congresses of Neurology.

His ethos enveloped the departments he worked in, including other professionals, patients, students, and hospital staff. For the last 20 years of his life, he was virtually blind. In anticipation of his loss of vision, he read several journals of neurology onto a dictaphone, which he was to listen to in solitude after he could no longer see. Ultimately, his hearing was also severely impaired. Nonetheless, he retained his sense of equanimity, never complained, and was always happy to see family and visitors.

His greatest legacy (both in the profession and for his family) will be his personal qualities. He did not seek positions of power or prestige, was unconcerned about material remuneration, and perennially radiated good cheer, kindness, and caring. We mourn his passing but know he remains very much alive in the hearts and minds of all those he touched.

– Nadir Bharucha •