



# WORLD NEUROLOGY

THE OFFICIAL NEWSLETTER OF THE WORLD FEDERATION OF NEUROLOGY

## The WFN: Past and Future

This is my first column as the WFN president in World Neurology but not my first article in our newsletter, edited by Steven Lewis. World Neurology has become an important source of information for members and serves to communicate information on the WFN.



WOLFGANG  
GRISOLD

Before I comment on the present state of the WFN, and the vision for this year and the following years, I want to thank the outgoing president, William Carroll, and all trustees having served in the previous administration, for their huge efforts and devotion to the WFN.

I also want to thank all committees, Specialty Groups, cooperating societies, and the WFN office as well as the professional conference organizer (PCO) (Kenes) who mastered the difficult transition from classic congress to virtual congresses.

Ryuji Kaji, the outgoing vice president, was chair of this successful

transition into a virtual congress. The abilities of the PCO also must be commended.

The WFN is a U.K. charity with 123 member societies. The work is supported by the London office, a few external coworkers, and a lean structure.

The WFN is by constitution and voting system in a constant flux in leadership. This year, one new trustee position and a new secretary general will be at disposition at the next Congress of Delegates (COD) meeting and adds to the dynamic effects of change.

The WFN has a robust and detailed structure, which serves as the basis for further improvement and development. This transition of administration will be smooth, and the main targets and goals will be adapted and improved.

In the first Trustee meeting, held Jan. 13, 2022, Prof. Guy Rouleau (Canada) was welcomed into the WFN board of trustees as the new vice president. Prof. Rouleau is from Montreal, Canada, was

the delegate of Canada to the WFN, has participated in the WFN department visit program, and is the Congress president for the World Congress of Neurology (WCN) 2023 in Montreal.

The trustees decided on the composition of the WFN leadership until the next COD meeting 2022. The position of the secretary general will be taken by Steven Lewis (U.S.), who has been a long-time supporter within the leadership. We decided to use the opportunity and allow more regional representation, which will include Prof. Chandrashekar Meshram (India), Prof. Marco Medina (Honduras), and Prof. Riadh Gouider (Tunisia) from the Asian, Latin American, African, and the Pan-Arab regions, respectively.

This is a unique opportunity to have representatives of the regions on the board, and gives the trustees the flexibility to have this option until the next COD meeting, where the election of one trustee and secretary general will take place, and the further composition of the coopted trustees can be adjusted again, within the available positions.

Due to COVID-19 and travel conditions, a traditional first face-to-face meeting with the trustees and the regions was not possible this year. COVID hampers activities on the one hand, and on the other, shows what creative potential this provides to communication, teaching, and virtual congresses. This will be overcome by a 2-day virtual conference, which will

see PRESIDENT'S COLUMN page 3

### CALL FOR CHAIR POSITION

#### Coma and Disorders of Consciousness Specialty Group

The WFN Specialty Group on Coma and Disorders of Consciousness is an important part of the Specialty Groups of the WFN.

We are looking for a new chair for this position, and we encourage you to send us your interest and qualifications. The basic condition is that you are a neurologist and come from a country that is a WFN member society. Your applications will be reviewed by a committee, and the region where you come from will be asked for advice. The WFN will make a final decision, and there will be no further elaboration on the decision.

The position will be for two years, renewable once, and is not remunerated. The task is to identify and bring in the most current aspects of this field and suggest topics and educational activities for the WCN.

For information on the other WFN Specialty Groups, visit the [WFN website](#).

If you are interested, please send: why you are interested and why you are qualified a brief CV present experience.

Address correspondence to: Wolfgang Grisold, President, WFN; c/o [laura@wfneurology.org](mailto:laura@wfneurology.org).

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WORLD NEUROLOGY

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FROM THE EDITORS

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

Welcome to the January-February 2022 issue of *World Neurology*. The issue begins with the President's Column, where new WFN President Wolfgang Grisold discusses the past, present, and future of the WFN as well as many activities and goals currently planned under his presidency. This report is also followed by an announcement and photos of all of the new WFN trustees.

Dr. Arina Tamborska announces an ongoing survey of neurologic complications of COVID-19 from the University of Liverpool with support from the World Health Organization (WHO) and the World Federation of Neurology (WFN).

In this issue's column about the WFN Committees and Specialty Groups, edited by WFN President Wolfgang Grisold, the activities of the WFN Education Committee and the WFN Environmental



STEVEN L. LEWIS, MD



WALTER STRUHAL, MD

Neurology Specialty Group are highlighted. This issue also includes a call for a new chair for the WFN Coma and Disorders of Consciousness Specialty Group.

In the History Column, Dr. Peter Koehler discusses the history of insulin coma therapy (ICT) and its historical role as a treatment for neuropsychiatric disease and the observations of the neurological signs induced by this procedure.

Dr. Gaminit Pathirana, president of the Association of Sri Lankan Neurologists (ASN), reports on the history and activities

of the ASN, which includes its recent and successful meeting.

In the WFN Training Center report, Dr. Ndayisenga Arlene provides a wonderful report of her WFN-sponsored full neurology training at the WFN Training Center at the Cheikh Anta Diop University in Senegal, where she is the first fully trained neurologist to graduate as a WFN-sponsored trainee from this center. She has now successfully returned to Rwanda as the fifth neurologist in that country.

Dr. Tissa Wijeratne provides a brief history of World Brain Day and the success of World Brain Day 2021 devoted to multiple sclerosis. The theme for this year's World Brain Day 2022 is also announced in this issue and is devoted to Brain Health for All.

As always, we would like to thank all readers for their interest in *World Neurology* and invite ideas for contributions to be sent to Dr. Lewis or Dr. Struhal •

CALL FOR SURVEY RESPONDENTS

# How Do You Diagnose COVID-19 Patients With Neurological Complications?

BY DR. ARINA TAMBORSKA

Researchers with the Global COVID Neurology Survey are calling on clinicians to help them better understand how neurological complications of COVID-19 are diagnosed around the world.

The project is being led by the University of Liverpool with support from the World Health Organization (WHO) and the World Federation of Neurology (WFN).

"We need clinicians around the world to share their experiences of how they diagnose neurological and neuropsychiatric



DR. ARINA TAMBORSKA

syndromes and perceive their association with COVID-19," said Dr. Arina Tamborska, NIHR academic clinical fellow in neurology at the University of Liverpool. "Your responses will play a role in the validation of a prospective WHO clinical record form, which will then be made openly available to everyone following the study's completion."

The survey will take up to 30 minutes to complete and involves questions about your clinical experience and several short case scenarios, describing patients with neurological complications as a result of COVID-19.

Participants will be named as a

collaborator in any publications arising from the survey. All clinicians who treat patients with COVID-19 are eligible to participate, including trainees.

"Whether you are a neurologist or any other health care professional involved in the care of COVID-19 patients, your help would be greatly appreciated with this study, which we hope will lead to better treatments and outcomes for patients," said Dr. Benedict Michael, senior clinician scientist fellow at the University of Liverpool.

Visit <https://redcap.link/covidneurosurvey> to take part. •

Dr. Arina Tamborska is a NIHR academic clinical fellow in neurology, brain infections group at the University of Liverpool, The Walton Centre NHS

# Announcement of New WFN Trustees

Congratulations to the new WFN trustees.

The roles and responsibilities of the WFN trustees are expansive and include everything from creating educational programs, to planning the biennial World Congress and overseeing all WFN charity and fiduciary

responsibilities.

The new trustees all bring unique skills and experience as well as perspectives from their regions to the trustee discussions and deliberations that will help guide WFN in the future.

We are pleased to have these leaders join the WFN trustees and are certain they will have a positive impact on improving the quality of the WFN's activities to promote quality neurology and brain health worldwide. •



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**Riadh Gouider**



**Co-opted Trustee:**  
**Marco Medina**



**Co-opted Trustee:**  
**Chandrashekar Meshram**

## PRESIDENT'S COLUMN

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give each region and the trustees the possibilities to learn more on the needs of neurology worldwide.

At this time, most terms of office for the committees come to an end, and much effort will be exercised to select the most interested and capable persons as well as to selecting regions and gender.

For the upcoming year, there is still uncertainty on the possibility of live meetings, but it is planned that the WFN leadership will meet with the leadership of the AAN and the EAN this year, at this year's conferences. Hopefully, it will be possible to also attend the Indian Academy of Neurology and the Asian Oceanic Congress of Neurology meetings, and the WFN will also attend other regional meetings. The annual COD meeting will be this fall, although the site has not yet been determined.

### WCN

One important task of the WFN is the organization of biennial congresses, rotating through the regions. After the successful congress with SIN 2021, which was virtual, the next congress is planned for 2023 in Montreal hosted by the Canadian society, and in 2025 in Seoul, Korea.

For both meetings the preparations at different levels are ongoing, and the first congress announcements and calls for Montreal will be appearing soon.

The WCN is an important part of the WFN activities and provides attractive programs with plenary sessions showcasing new and current developments, scientific sessions aimed at specific topics, a large number of abstract presentations, and general education. The WCN aims at high scientific quality and universal approach for many regions as well as communicative aspects between participants and members.

We will aim to have a patient day and will support the activities of young neurologists. For countries in need, adapted fees will be in place according to the income status, and congress bursaries will be available. As lessons learned from the pandemic, we will also provide hybrid activities featuring important topics.

### World Brain Day

The WFN has created the World Brain Day (WBD), which has become an important and powerful instrument to facilitate topics and neurological issues globally. This year's topic will be Brain Health for All, which will put us in contact with many regional societies, as well as reflects the importance of the topic that was started by the WFN last year on the initiative of our Past-President William Carroll. At this stage, the content was composed of videos and

*see* PRESIDENT'S COLUMN *page 6*

## HISTORY

# Inducing Neurological Signs by Hypoglycemia

BY PETER J. KOEHLER

Early every neurologist will have experienced the satisfaction of diagnosing hypoglycemia with more or less severe neurological signs and curing the patient “on the needle” by the administration of glucose. However, few will have done so to treat hypoglycemia that was induced on purpose.

## Somatic Treatments in Psychiatry

To understand this, we have to go back to the 1920s and 1930s when severe (neuro) psychiatric diseases were treated with extraordinary therapies. We already read about malaria fever therapy by Nobel laureate Julius Wagner-Jauregg (1857-1940) in the 1920s to treat dementia paralytica (general paralysis of the insane or GPI; see Volume 35, Issue no. 4 of October/November 2020, pp. 5 and 10).

Up to that period, the somatic treatments of psychosis had mainly consisted of morphine, hyoscine, bedrest, and hydrotherapy. Sleep therapy became one of the first specific treatments.

At first, it was induced by bromides that had been used for the treatment of epilepsy since 1857<sup>1</sup>, and after the turn of the century by barbiturates, as for instance applied by the Swiss psychiatrist Jakob Klaesi (1883-1980) at the Burghölzli asylum in Zurich in the early 1920s.

## Manfred Sakel

As happens so often in medicine, a new drug was investigated for alternative indications. Insulin had been discovered in 1922, and soon after the Austrian-Jewish Manfred Sakel (1900-1957), who was working with Kurt Mendel (1874-1946; eponymist of the Mendel-Bekhterev reflex) at the Lichtenfelde Sanatorium in Berlin, used low dosages in patients suffering from symptoms of morphine withdrawal (cold-turkey). In some patients, he had induced disorders of

consciousness unintentionally—“entweder durch Überdosierung von Insulin oder unzureichende Nahrungsaufnahme seitens der Patienten”<sup>2</sup> [either from overdosing of insulin or from inadequate food intake by the patient]—and found the desire for morphine and restlessness disappeared.

He published the findings in 1933, and the idea occurred that insulin coma might be effective for severe psychiatric disorders. Moving back to Vienna in that year, he worked at the university psychiatric clinic and presented a lecture at a meeting of the Medical Society of Vienna, “A new type of treatment for schizophrenics and patients with confused excitation.”<sup>3</sup>

After persuading his chief, Wagner-Jauregg’s successor Otto Pötlz (1877-1962), Sakel started experimenting with the method in schizophrenic patients. The effects seemed to be quite impressive—“die Erfolge meiner Methodik [waren] geradezu erstaunlich und eindeutig” [the successes of my methodology (were) downright astonishing and clear]—and he now wished to publish on a larger number of patients in a series of 13 articles in 1934-1935. As occurs from the title “Schizophreniebehandlung mittels Insulin-Hypoglykämie sowie hypoglykämischer Schocks,” he distinguished “insulin-hypoglycemia” from “hypoglycemic shock.” The latter had been carefully prevented initially, but in his method for the treatment of schizophrenia this was “die wirksame Kardinalpunkte” [the effective cardinal point].

## Four Phases

He started with increasing dosages of



Extensor plantar (Babinski) sign during ICT (still from the film).

insulin intramuscularly every 4-4.5 hours. The patient’s symptoms and signs or the level of glucose and blood pressure / pulse determined the moment to provide glucose to end the hypoglycemic period. In phase two, the purpose was to achieve a severe hypoglycemic shock, which could be recognized either by profuse sweating or gradual increasing somnolence. The latter condition could be interrupted by psychotic excitement and would finally result in coma.

“In dieser Phase treten bereits pathologischen Reflexe auf. Pyramidenzeichen: Babinski, Oppenheim, Mendel-Bechterew. Bei längerem Zuwarten kann das Koma eine solche Tiefe erreichen, dass sämtliche Reflexe, erlöschen. Also völlige Areflexie mit völliger Atonie der gesamten Muskulatur“

[At this stage, pathological reflexes already appear.

Pyramid signs: Babinski, Oppenheim, Mendel-Bechterew. If you wait a long time, the coma can reach such a depth that all reflexes are extinguished. So complete areflexia with complete atony of the entire musculature]. (For the Oppenheim and Mendel-Bechterew signs, I refer to the *World Neurology* issue of October 2010 “Foot eponyms leave their mark.”)

If no complications occurred, bradycardia down to 34 / minute could be observed. More rarely, an epileptic seizure was seen, including tonic-clonic cramps, tongue bite, and “bad pulse.” “Sehr bedrohlich, cave!” [Very threatening, beware!]

The problem was that it was difficult to predict the patients’

reaction from the dosage of insulin. Phase three lasted one or several days, during which no or very little insulin was administered. Recovery and registration of the effect were the purposes of this phase.

Sometimes it was sufficient only to induce phase one, which did not always mean that the hypoglycemia had been less severe, as sometimes lower glucose levels were found than in patients, who had become deeply comatose.

If it was not necessary to return to phase two, the patient would enter phase four, “Stabilisierung und Ordnung des Zustandsbild.” Even in this phase, the patient received low doses of insulin three times a day. During the treatment, the patient would be checked regularly and several medications should be standby, including adrenaline, glucose solution with gastric tube, as well as lockjaw, “cardiaca und analeptica.” Therefore, the treatment took up much time of the nursing staff. Intravenous glucose was only used in acutely dangerous situations.

Following the series of papers in the Viennese journal, Sakel published a book in 1935: *Neue Behandlungsmethode der Schizophrenie* [A New Method of Treating Schizophrenia]. The reactions to Sakel’s new therapy were very positive. Although Sakel moved to New York in 1936, ICT had already been introduced in the United States by Joseph Wortis (1906-1995), who had graduated from the University of Vienna and trained in psychiatry at the Bellevue Hospital in New York, after he had seen Sakel at work in Vienna in 1934. He translated Sakel’s monograph into English<sup>4</sup>.

## Early Trials

As for the mechanism of action, Sakel compared hypoglycemia to hypoxia and

Aus der Psychiatrisch-Neurologischen Universitätsklinik in Wien,  
Vorstand Professor Dr. Otto Pötlz.

## Schizophreniebehandlung mittels Insulin-Hypoglykämie sowie hypoglykämischer Schocks.

Von Dr. MANFRED SAKEL.

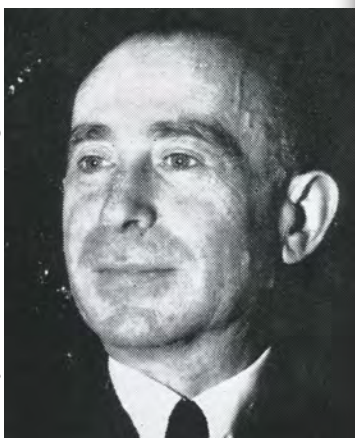
I.

Beobachtungen — die ich an einer großen Zahl von hypoglykämischen Zuständen machte, welche ich, bis zu einer gewissen Grenze, bereits gewollt in meiner Behandlung von Suchten herbeiführte, sowie auch an schweren hypoglykämischen Schocks, die entweder durch Überdosierung von Insulin oder unzureichende Nahrungsaufnahme seitens der Patienten ungewollt auftraten — ermutigten mich zunächst, die Hypoglykämie als solche zur Therapie von Erregungszuständen zu gebrauchen.

Durch die tatsächlich erzielten Erfolge im Verein mit den, in einzelnen Fällen verblüffenden psychischen, ja „charakterologischen“ Veränderungen, die nach schweren hypoglykämischen Schocks auftraten, wie ich sie bereits in meiner Arbeit über „Neue Behandlungsart der Morphinsucht“ andeutete, schien mir ein Weg gegeben, psychiatrische Erkrankungen, unabhängig von der toxischen Genese derselben, unspezifisch, jedoch kausal zu behandeln.

Die theoretischen Erwägungen — mögen sie falsch oder vielleicht auch richtig sein — welche für mich als Arbeitshypothese einer patho-physiologischen Psychiatrie zur Ausarbeitung der Methodik gute Dienste geleistet haben, werde ich am Ende dieser Ausführungen kurz mitteilen.

Insulin als Pharmakon wurde oft und von vielen vor mir zur Behandlung bei Psychosen herangezogen. Es be-



(above) Manfred Sakel

(right) Sakel’s 1934 publication.

# Report of the Association of Sri Lankan Neurologists

BY GAMINI PATHIRANA, ASN PRESIDENT

Sri Lanka is a beautiful island located south of India and southwest of the Bay of Bengal. Its documented history goes back 3,000 years, with evidence of prehistoric human settlements dating back 125,000 years. In terms of biodiversity, it is one of the richest regions of Asia. Excellent topographical and climatic variability throughout the country makes it favorable for a wide variety of flora and fauna, some of which had been unique to Sri Lanka.

Sri Lanka has a population of 22.1 million people. It is a multiethnic society of whom 74% are Sinhalese, 18% are Tamils, and 7% are Muslims.

The provision of health care had been a priority in Sri Lanka since the time of ancient kings. The Portuguese introduced western style medical care to Sri Lanka while it was a Portuguese colony. Later, the Dutch established a few hospitals in Sri Lanka's maritime provinces, followed by the British expanding this by establishing a military and estate health care system.

To this day, Sri Lankans enjoy free public health care. The private health care

system has since undergone considerable development as well. The history of neurology in Sri Lanka dates to the 1950s. From 1970 to around two decades later, the entire country was served by a single neurologist practicing in Colombo, the capital of Sri Lanka. At present, there are established neurology units in most large hospitals, including teaching hospitals and provincial general hospitals. Currently, almost 60 professionals in Sri Lanka have been board certified as either neurologists, pediatric neurologists, or neurophysiologists, 54 of which are serving the country at present.

The association of Sri Lankan neurologists (ASN) was formed in 2007. Dr. Johan Aarli, the then-WFN president, attended as the chief guest when the ASN was officially launched. Dr. J.B. Peiris was then elected as the patron of the association. Since its inception, the ASN have been carrying out annual academic sessions every year. In 2012, the ASN launched its annual journal, the *Sri Lanka Journal of Neurology* (<https://research.asn.lk/sri-lanka-journal-of-neurology/>). In addition to its annual academic sessions usually



GAMINI  
PATHIRANA



Council of the Sri Lankan Association of Neurologists.

held in February each year, the ASN has managed many regional collaborative meetings in various regional centers within the country. Furthermore, the ASN awards two research grants for local researchers in neurology every year.

2021 has been a challenging year for the ASN due to travel restrictions across the country. We were compelled to seek alternative methods to carry out our activities. Among the activities conducted this year were virtual neurology updates, virtual grand rounds, virtual young neurologist lectures, and virtual neurology quizzes among university students as well as other medical officers. This allowed us to reach a much wider audience, which was further enabled by

the government decision to reduce the cost of the zoom platform for students.

The ASN annual Congress for the year 2022 (ASNAC 2022) was held Feb. 18-20, 2022. The event was a hybrid event with a significant virtual component event. We are grateful for the support from 25 international speakers participating with four symposia. This year, the ASN had a successful pre-congress in neuro ophthalmology, coupled with two days of plenaries and symposia.

The ASN is a member society of the WFN. Prof. Wolfgang Grisold, the current president of the WFN, was the chief guest at the inauguration ceremony. We will provide you with a full report of the congress in in a subsequent issue of *World Neurology*. •

## HISTORY

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believed that certain nerve cells, responsible for the psychotic phenomena, would be damaged selectively. Although he claimed improvement in 88% and recovery in 70%, it was much debated afterward.

Kurt Kolle (1898-1975), neuropsychiatrist in Frankfurt and later professor of psychiatry in Munich, mentioned the figure of 45% of lasting full remissions, in comparison to only 10% of spontaneous improvement. The convulsions were believed to be the essential element and not the insulin or hypoglycemia.

Later comparisons with Electroconvulsive Treatment (ECT), developed by professor of neuropsychiatry in Rome Ugo Cerletti (1877-1963) in 1938, and leucotomy (a limited form of psychosurgery), were believed to show an advantage over insulin coma therapy (ICT), but opposite opinions were also seen. A randomly controlled trial of ICT and chlorpromazine, that became available for trials in 1952, demonstrated improved safety as well as effectiveness of the latter (1958)<sup>2</sup>. However, this did not stop the practice of ICT.

### New Methods to Induce Convulsions

Around the first publications of ICT for schizophrenia, the Hungarian-Jewish

neuropathologist and neuropsychiatrist Ladislav Meduna (1896-1964), working at Károly Schaffer's (1864-1939) Brain Research Institute in Budapest, introduced a new chemically induced shock therapy that produced convulsions without coma. A report of the first 26 patients treated with camphor or metrazol was published in 1936. Meduna emigrated to the United States (Chicago) in 1939. In fact, this was the first convulsive therapy, as in ICT convulsions were not the purpose.

The safer ECT was applied for the first time in 1938 and would later take over the chemical methods. Severe depressions may still be an indication of ECT.

**Filmlink:** Insuline coma therapy demonstrating several patients. The film is accessible from the MedFilm teaching and research database at [Metrazol, electric and insulin treatment of functional psychoses \(1934\) - Medfilm \(unistra.fr\)](https://www.metrazol.com/). On the film, the various phases of ICT can be observed. Restlessness, coma, Babinski signs, myoclonus, and seizures are all shown. The hypoglycemia is stopped by sucrose solution via gastric tube. If this did not result in improvement soon enough or in case of a seizure intravenous glucose was applied. After the treatment the patients received a carbohydrate-rich meal.

MedFilm is a collaborative initiative accommodated by the University of Strasbourg, France. They archive and



Preparing for sucrose solution administration by gastric tube to end the ICT (still taken from the film).

thus preserve medical and other health-related films, TV programs, commercials, and internet videos ranging from the very late 19th century to the early 21st century. They do not just store them online. Describing the films, putting them in context, and analyzing them fuels their and others' research in the fields of history of medicine, science, and media history.

**Acknowledgements:** I am grateful to Elisabeth Fuchs and Prof. Christian Bonah of the department of the history of life and health sciences of the University of Strasbourg, France. •

### Literature

1. Eadie MJ. Sir Charles Locock and potassium bromide. *J R Coll Physicians Edinb.* 2012;42:274-9.
2. Sakel M. Schizophreniebehandlung mittels Insulin-Hypoglykämie sowie hypoglykämischer Schocks. *Wiener medizinische Wochenschrift* 1934; 84: 1211-4.
3. Shorter E. Sakel versus Meduna: different strokes, different styles of scientific discovery. *J ECT.* 2009 25:12-4.
4. Shorter E. *A history of psychiatry.* New York, Wiley, 1997, pp.207-214.
5. Shorter E. *A historical dictionary of psychiatry.* Oxford, University Press, 2005, pp. 142-4.

## PRESIDENT'S COLUMN

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webinars that were well received and also stimulated the interest in this topic.

This year, we will work closely with the regions and will enhance our efforts to encourage local and regional events. Visit the [WFN website](#) for further developments and try to implement brain health initiatives in your region. As in previous years, we will provide tools, such as posters, press statements, and other useful support that can be adapted and used locally to celebrate WBD.

### WHO

From the ongoing activities of brain health and WBD, the close cooperation with the WHO will continue to globally raise the awareness for neurology and provide more access for those in need. The WFN has contributed jointly with the Global Neurology Alliance (GNA) to develop comments and suggestions for the Intersectorial Global Action Plan (IGAP), and the WFN considers this an important step for the global development of neurology.

Traditionally, the WFN has been in close contact with the WHO, such as the involvement in the ICD, the joint publication of the Atlas (Editions 1 and 2) and historically a “white book” (Country Resources for Neurological Disorders) on neurological resources, which dates back to 2006 and needs a relaunch.

The WFN also collaborates in WHO activities related to the COVID pandemic and is engaged in several workforces.

It will be important for the regional societies to engage in local

WHO activities as this has been done previously by some regions. This will deal with specific topics and can also increase awareness and possibly impact.

Closely linked with this global activity is the Needs Registry. Looking at needs, the outgoing president, Prof. Carroll, on behalf of the WFN, will finalize a Needs Registry, which is based on a membership survey, and will give more details on the worldwide needs. This important paper will be published on behalf of the WFN and will be of help to better understand neurologic needs and access worldwide.

### Education

Education is one of the core missions of the WFN. Education at all levels will be one of our main tasks.

We have a spectrum of educational activities, ranging from the Junior Traveling Fellowships and congress bursaries, to WFN Teaching Centers and Department Visits. Also, educational sessions are part of the WCN. We have an educational day in Africa, a joint headache educational day with the International Headache Society and the Global Patient Advocacy Coalition

(GPAC) and the annual Regional Teaching Course in Africa with the EAN. These activities will be continued and updated. (For details, visit the [WFN website](#)). The educational days in Africa have become a good template to reach a large audience, and these educational days can be expanded to other regions. The education day on headache with IHS/GPAC will be continued this year.

We will increase our activities in e-learning, and the e-learning hub on the WFN website, which was introduced last year, and will be expanded. We look

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**From the ongoing activities of brain health and WBD, the close cooperation with the WHO will continue to globally raise the awareness for neurology and provide more access for those in need. The WFN has contributed jointly with the Global Neurology Alliance (GNA) to develop comments and suggestions for the Intersectorial Global Action Plan (IGAP), and the WFN considers this an important step for the global development of neurology.**

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forward to seeing how this important instrument will contribute to global educational activities.

We are also determined to look at new educational activities, such as mentorship, advocacy, and leadership. Format hybrid meetings and asynchronous meetings will be considered. New models, such as apps, mini or micro learning, as well as the concept of M (mobile) learning will be evaluated for possible use.

### Core Curriculum

The definition of neurology as a field is difficult. Even more difficult to define is the content of a core curriculum. This is due to the large variation of the resources of our membership, which ranges from highest standards toward members with hardly any neurological workforce. Discussions within the WFN on a possible core curriculum have been ongoing for years. Interviews with

several members have shown that a basic core curriculum will be important for many members societies to develop neurology and neurological facilities.

For the development of future programs, we will also receive input from the specialty groups and the Global Neurology Alliance, which is composed of world societies, specialist societies, the regions, and specialty groups.

In previous years, this cooperation has been effective and adds to the impact of programs. A good example is the Regional Teaching Course in Africa, which is chaired by the EAN and where the AAN, the International Brain Research Organization (IBRO), and the WFN regularly participate. We are grateful to the educational activities of the specialty groups. As an example, at this year's International Congress of Neuromuscular Disease (<https://icnmd.org>), a joint WFN-ICNMD lecturer will

*see* **PRESIDENT'S COLUMN** page 9

WORLD BRAIN DAY 2021

# Summary of Activities and Report

BY PROF. TISSA WIJERATNE, MD, PHD, FRACP, FRCP, FAAN, FEAN

Let us convey our most sincere gratitude to all member societies for the engagement and strong support with yet another successful world brain day campaign. Neurological disorders are the leading cause of disability, and

the overall burden will continue to rise with the pandemic's ongoing impact and the problems associated with post COVID-19 neurological syndromes (Long-COVID).<sup>1-4</sup> The burden of neurological disorders impacts mostly low to middle-income countries, where a larger percentage

of the world's population continue to experience the double whammy of disease burden and the impact of the pandemic.<sup>5-7</sup>

In this context, the WFN World Brain Day (WBD) campaign is of major importance. WBD was established in 2013

and first executed in 2014. Since then, this global advocacy campaign has been very successful.

Every year on July 22, the ambitious WBD campaign advocates brain health globally. In 2021, the WFN worked with the Multiple Sclerosis International Federation (MSIF), along with other broader global patient support organizations and WFN member societies, with the theme of "Stop Multiple Sclerosis" over several months until the World Congress of Neurology andECTRIMS Congress in October.

Thousands of public awareness programs, educational programs, and social media activities were promoted worldwide as part of this massive advocacy campaign from July 22 until the end of October 2021.

## Summary of Achievements

Outstanding social media reach during July 2021 with key statistics of 247,000 Twitter impressions in July. The website saw an increase in traffic:

- 47,000 users: an increase of 66.9%
- 57,000 sessions: 55%
- 281.7% increase in traffic during WBD week, for roughly 7,821 users.
- 48 promotional videos united the international community in support of World Brain Day (These interviews are highly inspirational, and I strongly recommend you check these out here).

Five social media videos attracted additional attention from the global audience. On World Brain Day, the WFN hosted a worldwide webinar to elevate multiple sclerosis awareness, focusing on the key impact points:

- Prof. William Carroll, then-president of

- the World Federation of Neurology
- Prof. Tissa Wijeratne, chair of World Brain Day, World Federation of Neurology
- Prof. Wolfgang Grisold, Secretary-General of the World Federation of Neurology
- Associate Prof. Brenda Banwell, chair of MSIF's International Medical and Scientific Board
- Prof. Mai Sharawy, co-founder of MS Care Egypt and chair of the board of MSIF

In summary, the 2021 WBD campaign was a resounding success as the campaign reached out to over 148 million people worldwide.

We are also pleased to announce that the 2022 World Brain Day campaign will be devoted to Brain Health for All (see box on the right and the following link: <https://wfneurology.org/world-brain-day-2022>) •

Prof. Tissa Wijeratne is the chair of Public Awareness and Advocacy at the World Federation of Neurology. [Tissa.Wijeratne@wfneurology.org](mailto:Tissa.Wijeratne@wfneurology.org)

## References:

1. Carroll, W.M., The global burden of neurological disorders. *Lancet Neurol*, 2019. 18(5): p. 418-419.
2. Feigin, V.L., et al., The global burden of neurological disorders: translating evidence into policy. *Lancet Neurol*, 2020. 19(3): p. 255-265.
3. Wijeratne, T., et al., COVID-19 Pathophysiology Predicts That Ischemic Stroke Occurrence Is an Expectation, Not an Exception-A Systematic Review. *Front Neurol*, 2020. 11: p. 607221.
4. Wijeratne, T. and S. Crewther, Post-COVID 19 Neurological Syndrome (PCNS); a novel syndrome with challenges for the global neurology community. *J Neurol Sci*, 2020. 419: p.

## Previous World Brain Day Topics

- 2014 Our Brain Our Future
- 2015 Epilepsy (ILAE)
- 2016 Brain Health and the Aging Population (ADI)
- 2017 Stroke (WSO)
- 2018 Clean Air for Brain Health (WFN Environmental Neurology SG)
- 2019 Migraine (IHS)
- 2020 Parkinson's Disease (IPD and MDS)
- 2021 Stop Multiple Sclerosis (MSIF)

117179.

5. World Brain Day 2021 'Stopping MS': an interview with Tissa Wijeratne and Joanna Laurson-Doube. *Communications Biology*, 2021. 4(1): p. 873.
6. Wijeratne, T. and W. Carroll, World Brain Day 2021: Global campaign to stop multiple sclerosis. *Mult Scler*, 2021. 27(9): p. 1318-1319.
7. Wijeratne, T., et al., World Brain Day 2021: a call to stop multiple sclerosis. *Lancet Neurol*, 2021. 20(8): p. 597-598.

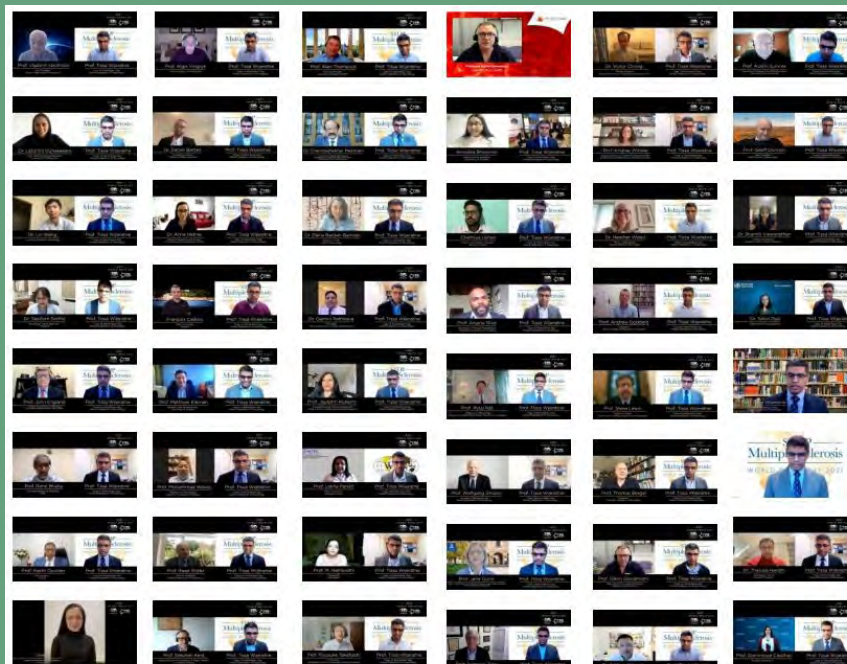


TISSA WIJERATNE

## 5 Social Media Videos to Help Attract Attention



## 48 promotional videos Unite the International Community in Support of World Brain Day 2021.



## ANNOUNCING WORLD BRAIN DAY 2022



WORLD FEDERATION OF NEUROLOGY

# WORLD BRAIN DAY

## Brain Health for All

This year's WBD will be devoted to Brain Health for All and will follow the WFN Brain Health campaign from last year.

Our goals are:

**Awareness:** Brain health is vital for mental, social, and physical wellbeing.

**Prevention:** Many brain diseases are preventable.

**Advocacy:** Global efforts are required for optimal brain health.

**Education:** Education for all is key for brain health.

**Access:** Equitable access to resources, treatment, and rehabilitation is essential for brain health.

Please follow us on social media and website for ongoing activities.

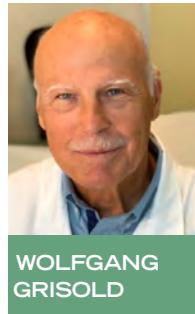
## WFN COMMITTEES AND SPECIALTY GROUPS

## WFN ENSG and the WFN Education Committee

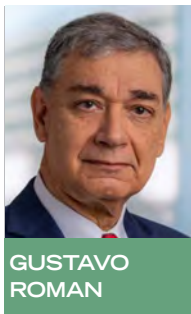
BY WOLFGANG GRISOLD, MD

This column on the Committees and Specialty Groups is the latest of this series, which has been edited by me in my previous role as the secretary general. It serves to provide more insight into the role of the WFN committees as well as the specialty groups. It also allows the international readers to see the works and activity of the committees and groups as well as to allow them to engage in a particular topic. The duration of leadership in the Specialty Groups and Committees is limited. The trustees may consider to rearrange some committees to adapt to ongoing needs. Therefore, we will continue this column so that we can explain the composition, but also the tasks and the people behind them.

This month, we will introduce the Education committee, chaired by Steven Lewis. He will outline this committee's work. Being part of this committee over the years, I am proud of its achievements and am aware that this content is one of the main tasks and missions of the WFN. The present activities have been reduced by COVID in almost all aspects, but the new administration will support continued evolution of our activities; in addition to resuming the Teaching Centers



WOLFGANG GRISOLD



GUSTAVO ROMAN

and Department Visits, we will be able to provide a core curriculum, as well to look into new activities related to education, such as advocacy and leadership.

From the Specialty Groups, we choose the Environmental Neurology Specialty Group, which is presently chaired by Gustavo Román, and has made us aware of the importance to consider environment on neurology. Much credit goes to Jacques Reis who organized meetings in Strasbourg and made environment the topic of the WBD 2018. At that time, the significance of the topic was not appreciated by some, but over time, this initiative has become extremely valuable. This group has also been active since the beginning of the pandemic and has written an important paper.



Members of the ENSG.

## WFN Education Committee

The chair of the WFN Education Committee is Steven Lewis (U.S.), the current acting secretary general of the WFN, and the co-chair is Riadh Gouider (Tunisia), current co-opted WFN Trustee. For a list of current members, please see the WFN website.

The task of the WFN Education Committee is to provide strategic direction and oversight to the many current and future educational activities of the WFN, in keeping with the mission of the WFN to foster quality neurology and brain health worldwide by promoting

global neurological education and training, with the emphasis placed firmly on underresourced parts of the world.

Current activities of the Education Committee include the WFN Department Visit Program, where trainees from low- and lower-middle-income countries, primarily from Africa, can attend four-week observerships. This allows these trainees to witness the breadth of neurology in outstanding institutions in Europe (for African trainees) and Canada (for trainees from Africa and Central and South America), due to the generous support and hospitality of these local societies and institutions.

In addition, the Education Committee organizes and oversees the WFN Teaching (Training) Centers to provide neurological training opportunities for residents of low- and lower-middle income countries. There are currently five WFN Teaching Centers, two for Anglophone African trainees (Cairo, Cape Town), two for Francophone African trainees (Dakar, Rabat), and one for trainees from Central and South America (in Mexico City).

Both the Department Visit Programs and the Teaching Centers were "on hold" during the COVID-19 pandemic, but all are resuming this year to provide much needed short- and long-term training for young neurologists in low- and lower-middle-income countries. Likewise, the WFN Junior Traveling Fellowships provide bursaries for up to 30 young neurologists and trainees annually to attend national and international meetings; this program is also resuming this year after being on hold during the pandemic. A recent call for JTF applicants for 2022 was just announced.

Please see previous issue of World Neurology for reports from many of the trainees who participated in the Department Visit Program, Regional Training Centers, and recipients of Junior Traveling Fellowships.

In addition to the above, another important activity of the WFN Education

## Publications by the Group Members Related to Environment and Neurology

1. Special Reports: History of the WFN Environmental Neurology Applied Research Group. <https://worldneurologyonline.com/article/special-report-history-of-the-wfn-environmental-neurology-applied-research-group/>
2. Reis J, Román GC. Environmental neurology: a promising new field of practice and research. *J Neurol Sci.* 2007 Nov 15;262(1-2):3-6. doi: 10.1016/j.jns.2007.06.017. Epub 2007 Jul 24. PMID: 17651758.
3. Román GC, Spencer PS, Reis J, Buguet A, Faris MEA, Katrak SM, Láinez M, Medina MT, Meshram C, Mizusawa H, Öztürk S, Wasay M; WFN Environmental Neurology Specialty Group. The neurology of COVID-19 revisited: A proposal from the Environmental Neurology Specialty Group of the World Federation of Neurology to implement international neurological registries. *J Neurol Sci.* 2020 Jul 15;414:116884. doi: 10.1016/j.jns.2020.116884. Epub 2020 May 7. PMID: 32464367; PMCID: PMC720473
4. Wasay M, Khoja A. Environment and Neurological Diseases: Growing Evidence for Direct Relationship. *J Coll Physicians Surg Pak.* 2018 May;28(5):337-338. doi: 10.29271/jcpsp.2018.05.337. PMID: 29690958.
5. Reis J, Spencer PS, Wasay M, Grisold W, Carroll WM. Clean air for Brain Health; ongoing agenda of 2018 World Brain Day. *J Neurol Sci.* 2019 Feb 15;397:61-62. doi: 10.1016/j.jns.2018.12.015. Epub 2018 Dec 12. PMID: 30594104.
6. Béjot Y, Reis J, Giroud M, Feigin V. A review of epidemiological research on stroke and dementia and exposure to air pollution. *Int J Stroke.* 2018 Oct;13(7):687-695. doi: 10.1177/1747493018772800. Epub 2018 Apr 27. PMID: 29699457.
7. le Moal J, Reis J. Do we need a specialization in Environmental Medicine? *J Neurol Sci.* 2011 Mar 15;302(1-2):106-7. doi: 10.1016/j.jns.2010.05.023. Epub 2010 Jun 9. PMID: 20542523.
8. Reis J, Grisold W, Öztürk Ş, Wasay M, Román GC, Carroll WM. The World Federation of Neurology and the challenges in Environment Neurology. *Rev Neurol (Paris).* 2019 Dec;175(10):742-744. doi: 10.1016/j.neurol.2019.08.006. Epub 2019 Sep 17. PMID: 31540677.
9. Reis J, Spencer PS, Román GC, Buguet A. Environmental neurology in the tropics. *J Neurol Sci.* 2021 Feb 15;421:117287. doi: 10.1016/j.jns.2020.117287. Epub 2020 Dec 19. PMID: 33445007.
10. Spencer PS, Lagrange E, Camu W. ALS and environment: Clues from spatial clustering? *Rev Neurol (Paris).* 2019 Dec;175(10):652-663. doi: 10.1016/j.neurol.2019.04.007. Epub 2019 Jun 21. PMID: 31230725.

## PRESIDENT'S COLUMN

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illustrate the topic of neuromuscular disease in lower middle-income countries.

The content of education is not limited to knowledge and science. We also need to teach advocacy and leadership for neurologists. We must find ways to help our young and trained neurologists find attractive positions and work in and for the WFN.

Our vision is that successful participants of our leadership seminars will be able to participate in the work of committees and leadership and be able to learn and see the organizational needs and requirements.

The WFN has a grant award program with yearly funding. This will be continued and will be mainly directed toward educational activities in both research and practical application.

### Publications

The WFN has three publications: the *Journal of the Neurological Sciences* (John England, Editor), *eNS* (Walter Struhal, Editor) and *World Neurology* (Steven Lewis, Editor). These publications help to promote neurology worldwide and are an important source of information

and education. We have now established a platform for recommendations from the editors, and hope to be able to synchronize on important topics in the future

Social media is helping to promote new articles and important developments and has become an important part of our communication. The content and targets will need to expand to a larger group, including lay persons, patients, and health care providers.

### Internal Work

Based on the WFN structure, we need to improve communication and outreach with regions and member societies. The detailed work with the members societies from last year has increased our understanding and identified some blind spots, which need to be removed.

Internally, the WFN needs to be prepared for the future. In addition to gender, young neurologists, and patients, we will make sure the future transitions of administrations will be smooth and already incorporate the president-elect, which will need a change of the procedures.

Importantly, we will need to consider gender and diversity, the need of young neurologists, and install a platform for

**Internally, the WFN needs to be prepared for the future. In addition to gender, young neurologists, and patients, we will make sure the future transitions of administrations will be smooth and already incorporate the president-elect, which will need a change of the procedures.**

patient organizations into the WFN. This will need preparatory work and will require important input from our committees, which will be asked to provide ideas and suggestions.

This work needs strong administrative support from the trustees and organizationally from the office team, which is an important part of our strategy.

### In Summary

Communication, increasing the impact of the WFN, and internal adaptations will be the task for the WFN in the next period, and I will use this platform to update and inform on the recent developments.

Despite our own personal regional background and regional interests, we have to strive for a cosmopolitan approach, which by etymology would be best described as "citizens of the world" and describes the spirit of the WFN's approach.

I look forward serving as the WFN president and building on our robust structure to consolidate and improve the present structures and to encourage and work on future projects. •

*Email me with your ideas, suggestions and comments:*

[wolfgang.grisold@wfneurology.org](mailto:wolfgang.grisold@wfneurology.org)

## COMMITTEES

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Committee is oversight of the AAN/WFN Continuum program, where hard copies and online access of Continuum, the AAN's official CME journal, is provided free (in both hard copy and online form, depending on preference) for the education of neurologists in low- and lower-middle-income countries.

These are just some of the many activities of the WFN Education Committee, with many additional activities and projects organized and supported by a growing number of educational subcommittees, including those involved in eLearning and various other critical educational offerings to improve neurologic education and care throughout the world.

### WFN Environmental Neurology Specialty Group

The chair of the Environmental Neurology Specialty Group is Gustavo Román (U.S.) and the vice chair is Şerefnur Öztürk (Turkey). For a list of current members, please see the WFN website.

### History of the WFN Environmental Neurology Specialty Group (ENSG)

The idea of creating a dedicated research group on environmental issues in neurology arose during the World Congress of Neurology (WCN) in Sydney in 2005. In 2007, Prof. Prockop announced

its creation in a letter published in the *Journal of the Neurological Sciences (JNS)*. The Environmental Neurology Applied Research Group (ENARG), as it was originally called, became the successor of the former neurotoxicological group, created and chaired by Prof. Prockop. The first members considered that interactions between man and his environment, as well as the environmental impact on our health, notably brain health, have a major importance for neurologists. The recent pandemic illustrates the pertinence of the holistic and transdisciplinary approach that characterizes environmental neurology.

**Aim and vision:** The goals of the ENSG are to increase awareness of the relationship for the environment and neurological disorders, to promote education and clinical research in all matters having to do with the adverse effects of environmental substances of interest, including agents that occur naturally (algal toxins, phytotoxins, and mycotoxins associated with neurological disease, in addition to neurotropic viruses), as well as pollutants that arise as a result of human activity.

Humans may be exposed to these substances/events in industrial/occupations/situations or as a result of terrorism or forced displacements. There are important global threats, such as water pollution, environmental triggers of sporadic neurodegenerative diseases, global warming, and COVID -19 (including long COVID).

**Activities:** Since our 2015 report,

the ENSG has had a major impact on the activities of the WFN. We have participated in 2017 Kyoto, 2019 Dubai, and 2021 Rome (virtual) congresses. In 2018, the ENSG acted as scientific adviser for World Brain Day and issued a dedicated article. The impact was interesting, although this day was ignored by several societies. In 2020, anticipating the huge neurological impact of the COVID-19 pandemic, our group launched a call for registries in neurology and issued one of the most cited articles summarizing the knowledge about the neurological involvement of COVID-19.

In our presentations at the WCN in Rome, we summarized the first lessons from the COVID -19 pandemic. Our goal is to provide quickly to all neurologists worldwide accurate information about the diagnosis as well as of the therapies, and to improve our knowledge by managing dedicated easy-fulfilled registries worldwide. A good example of such absence is illustrated by the difficulties in studying the neurological aspects of the Long-COVID. International comparisons are obviously needed from neurologists as for decision-makers in health policies.

Our most important project is to involve worldwide neurologist in a survey by questionnaire and then to promote an education a course online.

To our knowledge, no other specialty has ever created a group dedicated to environmental aspects in their discipline. For a list of publications of this group, please see the box. •



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