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WORLD FEDERATION OF NEUROLOGY

WORLD NEUROLOGY

THE OFFICIAL NEWSLETTER OF THE WORLD FEDERATION OF NEUROLOGY

Brain Health and Cherry Blossoms

Biennial meeting of the WFN Aphasia, Dementia, and Cognitive Disorders Specialty Group in Japan.

BY DR. AIDA SUÁREZ-GONZÁLEZ, PROF. MORRIS FREEDMAN, PROF. MANABU IKEDA, DR. YUTAKA TANAKA, PROF. MASARU MIMURA, AND PROF. SUVARNA ALLADI.

Attendees of the WFN Specialty Group ADCD biennial meeting at the entrance of the conference venue, Nara Kasugano International Forum at Nara Park.

The attendants for the 2024 biennial meeting of the WFN Aphasia, Dementia, and Cognitive Disorders Specialty Group (ADCD SG) arrived in Nara, Japan, about the same time as the sakura (Japanese cherry trees) reached full bloom. This served as a timely metaphor to usher in the four vibrant days of all things cognitive neurology that followed, elegantly wrapped in the most exquisite Japanese hospitality.

The venue of the meeting was the beautiful Nara Kasugano International Forum in Nara Park, surrounded by local deer and a short walk from the famous Todai-ji Buddhist temple. The activity was organized by ADCD chair Prof. Suvarna Alladi and local organizing chairs Prof. Manabu Ikeda and Dr. Yutaka Tanaka, in partnership with the Neuropsychology Association of Japan and the Japan Society for Higher Brain Function. This was a memorable meeting, with more than 50 attendees from around the world. (Most were also speakers at the various symposiums that built on the 54-year tradition of scientific meetings of the group.)

Panelists and attendees appreciated the opportunity to delve into the contributions of Japanese behavioral neurology, which was one of the highlights of the event. Other highlights included:

- Plenary sessions delivered by Prof. Etsuro Mori on innovation in dementia studies, and Prof. Manabu Ikeda on prodromal stages of dementia and primary psychiatric diseases.

see **BRAIN HEALTH** *page 10*

PRESIDENT'S COLUMN

WFN Digital Update and a Recap of the Council of Delegates Meeting

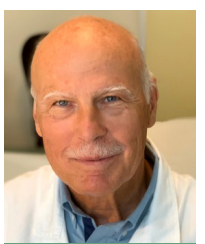
Prof. Wolfgang Grisold highlights the latest WFN events around the world.

BY PROF. WOLFGANG GRISOLD, FAAN

The World Federation of Neurology (WFN) now has 125 members, as we welcome our latest addition, Ghana. The WHO has 194 member states, which leaves 69 more members to become part of WFN.

The WFN owns several publications, including *World Neurology* (*WN*), which has an estimated readership of 25,000. *WN* focuses on news from the scientific societies, updates on developments, regional issues, and historical content, among other topics.

Our newly applied WFN Google Analytics reveal that countries with the highest interest in the **WFN website** are the U.S., India, and Great Britain, followed by a stable number of countries all over the world .



WOLFGANG GRISOLD

We recently launched an initiative called **WFN Digital Update** (WNU), which has helped us reach countries worldwide with educational and training opportunities. We also remind our readers our **official journals,** the *Journal of the Neurological Sciences* (*JNS*) and the *eNS*, serve in the interest of the WFN. The *JNS* features a regular **Service Page**, which will add to communications from *WN* along with the website and social media.

Another important initiative is the **Global Advocacy and Leadership Program (GALP)**, a joint effort between the WFN and the American Academy of Neurology (AAN). We had great interest in the first event, with 94 applicants from 44 low/middle- and low-income countries. The goal is to provide young and middle-aged

see **PRESIDENT'S COLUMN** *page 3*

INSIDE

WORLD NEUROLOGY

WORLD NEUROLOGY, an official publication of the World Federation of Neurology, provides reports from the leadership of the WFN, its member societies, neurologists around the globe, and news from the cutting-edge of clinical neurology. Content for *World Neurology* is provided by the World Federation of Neurology and Ascend Media.

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FROM THE EDITORS

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

STEVEN L. LEWIS, MD

WALTER STRUHAL, MD

We'd like to welcome all readers to the October-November 2024 issue of *World Neurology*. In this issue's President's Column, Prof. Wolfgang Grisold provides his updates on several ongoing activities, such as the outcome of the Council of Delegates (COD) meeting in September, including the results of the trustee election, and the addition of Ghana as the 125th neurologic society in the World Federation (WFN). The President's Column also details the recent changes to the WFN bylaws.

Prof. Grisold also reports on the status of the recent WFN Digital Neurology Updates (WNU), the ongoing Global Advocacy and Leadership Program (GALP) with the WFN and the American Academy of Neurology (AAN), and other current global initiatives.

This issue also includes early reports of the activities that surrounded World Brain Day 2024, including a report from Tunisia by Prof. Riadh Gouider, co-chair of the WFN Education Committee, and personal reflections about World Brain Day from World Brain Day co-chair, Prof. Tissa Wijeratne. In a related story, a protégé of Prof. Wijeratne, high school student Sarah McPartland from Victoria, Australia, outlines World Brain Day activities achievable in the secondary school and community level with excellent mentorship and support.

In this issue's History column, Dr. Peter Koehler describes the fascinating history of organ-based extracts, including the pineal gland, for therapeutic interventions for disorders of the nervous system. Dr. Aida Suárez-González, Prof. Morris Freedman, Prof. Manabu Ikeda, Dr. Yutaka Tanaka, Prof. Masaru Mimura, and Prof. Suvarna Alladi chronicle the many activities at the biennial meeting of the WFN Aphasia, Dementia, and Cognitive Disorders Specialty Group that took place in April in Nara, Japan. This issue also includes exciting announcements by Prof. Carlos N. Ketzoian for two upcoming international courses on neuroepidemiology, sponsored by the WFN Specialty Group on Neuroepidemiology.

The President's Column also details the recent changes to the WFN bylaws.

Also in this issue, Prof. Raad Shakir, on behalf of the WFN Nominating Committee, presents an important call for nominations for the WFN positions that will be elected in 2025.

Dr. Dilraj Singh Sokhi describes a neurology teaching course in two centers in Uganda as an example of international collaboration.

Thanks to all neurologists and neurologic trainee readers in all regions of the world for their interest in the WFN and *World Neurology*. We look forward to continuing to share more details about the many upcoming activities for neurologists worldwide in upcoming issues. •

World Federation of Neurology Election 2025

The importance and role of the Nominating Committee.

BY RAAD SHAKIR CBE, FRCP
ON BEHALF OF THE NOMINATIONS COMMITTEE

The World Federation of Neurology (WFN) is truly global with 125 member societies. The organization is run by seven elected trustees. Four of them are termed officers: the president, vice president, secretary general and treasurer, with three others termed elected trustees. It is crucial to point out that the WFN is run by all the trustees with equal voting rights. In case of a tie, the president casts the deciding vote.

The WFN operations depend on the quality and fair representation of the seven trustees. When deemed appropriate, two additional non- elected trustees can be co-opted for one year at a time. The composition of the trustees in turn depends on the good judgment, sense of fairness, and equity of member societies to pursue and elect trustees who will represent this global organization to further its goals and to clearly reflect geographic and gender diversity.

The WFN is a United Kingdom registered charity and is therefore exempt from U.K. taxes including income tax and value-added tax. The WFN is also a U.K. registered company limited by guarantee and does not have a share capital. It is therefore governed by the U.K. Charities Commission and the U.K. Companies Acts of 1985 and 1989 through its Articles of Association (Constitution). Changes to the articles must accord with Charities Commission and U.K. Companies Acts.

The Nominating Committee (NC) fulfills a vital role in the trustees' election process. The NC procedures are contained in the WFN Articles of Association. Also, the WFN charge of the Nominating Committee states that the following factors are considered by the NC in assessing each nominee's candidature:

RAAD SHAKIR

- national and international professional stature
- contributions to the WFN in the past
- commitment to the future growth and development of the WFN.

In evaluating nominations, consideration is also given to geography and gender.

If any of these considerations are lacking in the list of those proposed by the delegates, the NC may supplement them by identifying appropriate candidates from the WFN database.

Candidates who miss the application deadline (as per Clause 6.3 of the Articles of Association) can still be proposed by five authorized delegates to be considered by the NC up to 30 days prior to the start of electronic voting. These late applicants must be supported by their member society and shall be subject to the same scrutiny as other applicants. This route is for those who for unavoidable circumstances have missed the application deadline.

The current composition of the elected trustees is unbalanced to say the least. Of the seven men, three are from North America, three from Asia, and one is from Europe. Those ending their terms in 2025 are President Wolfgang Grisold (Europe), Vice President Guy Rouleau (North America), and one trustee, Dr. Chandrashekhar Meshram (Asia Oceania). Dr. Meshram will be finishing his first term and is eligible to stand for a second term.

The WFN aims to elect trustees on merit, trusting that member societies will take into full account geography and gender balance. To do otherwise risks trustees serving select constituencies with potential conflict rather than the benefit of the organization overall.

The election in 2025 will be vital to the future of the WFN. Member societies will need to consider all of the important and vital points made and make sure that we fulfill our goal of fostering quality neurology and brain health worldwide.

The Nominating Committee therefore urges all member societies to consider nominating appropriate candidates and actively participating in the election.

We await to receive your nominations before the deadline which will be announced soon on the WFN website •

Prof. Raad Shakir is chair of the WFN Nominations Committee and a past president of the WFN.

PRESIDENT'S COLUMN

continued from page 1

neurologists with the tools they need to advocate for patients in neurology and to be leaders in neurology. This policy of advocacy and leadership is especially important in countries where neurology is developing. Insights regarding leadership negotiations help the progress of neurology in those countries.

Advocacy is also one of the strategic tasks of the **WHO International Global Action Plan (IGAP)**, which increases awareness of the growing need for advocacy around the world. The GALP course will begin in person at the **AAN Annual Meeting** April 5-9 in San Diego, and will have several virtual updates culminating in a second face-to-face meeting at the **World Congress of Neurology** (WCN) in Seoul, which will include a public graduation.

Our other virtual activities, such as the educational days, have proved successful. We anticipate a new educational day with the Asian and Oceanian Association of Neurology (AOAN) in February on movement disorders, and another educational day with Africa next year on neuroimmunology. For this year, we look forward to the **International Headache Society-Global Patient Advocacy Coalition Headache Day** that will be on Nov. 23.

Council of Delegates

At the recent Council of Delegates (COD) meeting, we confirmed the results of the elections and carried motions for changes to our bylaws. On Sept. 24 and 25, the WFN`s elected and co-opted trustees held a face-to-face meeting in the London office. They also met with the participants in the WFN COD on Sept. 25, as a virtual meeting.

For the COD, 72 people participated and 58 member societies attended.The president, officers, and several committee chairs reported on WFN proceedings. There were four motions that were accepted:

- Approval of the Auditors' Report for 2023.
- Reappointment of Griffin Stone Moscrop & Co. as auditors.
- Change of the WFN bylaws to have a president-elect and a past-president in the future.
- Acceptance of Ghana as the 125th member of the WFN.

As many societies have done already, the WFN will have the position of a president-elect, and the immediate past-president will remain on the board for one year following his or her term in office. This is necessary to preserve continuity, which is important for many of the long-term tasks of the WFN.

Future WFN presidents should have previously held office either as a trustee or acted as chair of a WFN committee for at least one year to gain insight and establish a profile within the organization. In the future, conflicts of interest need to be transparent for all officers and trustees. In particular, the WFN president must not hold an executive position in another scientific society.

The vote for the first president-elect will be in three years, and the first past-president will be the newly elected president who takes office in 2025.

For this COD meeting, elections were held for the position of one trustee, replacing Prof. Alla Guekht, whose second term ended. Votes were received electronically from 52 member societies for a new trustee. Prof. Tissa Wijeratne, who was nominated by the Association of Sri Lankan Neurologists, was elected. He has been engaged in many WFN activities for many years, in particular World Brain Day. I want to thank all of the applicants for their efforts in running for this important position.

Following the COD meeting, the president and the trustees thanked Prof. Guekht for her relentless devotion to the WFN. The co-opted trustees Prof. Maria Benabdeljlil and Prof. Minerva Lopez Ruiz were also recognized. All were awarded with a WFN plaque.

For the 2025 election, the positions of president, vice president, and one elected trustee (Prof. Chandrashekhar Meshram — re-electable once) will be up for election. The call for candidates will be made next year. We expect many suitable applicants who will engage to bring the WFN forward and increase the presence and importance of neurology.

Following the COD meeting, the first **WNU** took place. The WNU 2024 was a virtual 2-day meeting moderated by Profs. Steven Lewis, Riadh Gouider, and Wolfgang Grisold live from the London office. We welcomed speakers from many societies and had excellent faculty and talks. The meeting was accredited by the European Accreditation Council for Continuing Medical Education with 9 CME points. Participants came from 60 countries.

This was the first virtual interim meeting of the WFN, and the aim was to fill the gap between the biennial WCN with necessary and timely updates. Many speakers have agreed to submit a summary of their lectures to the journal, which will be a source of information and is accessible as an Open Access journal.

The main pillars of the WFN are education and global activities. Please see our latest updates on education on the **WFN Essentials** page.

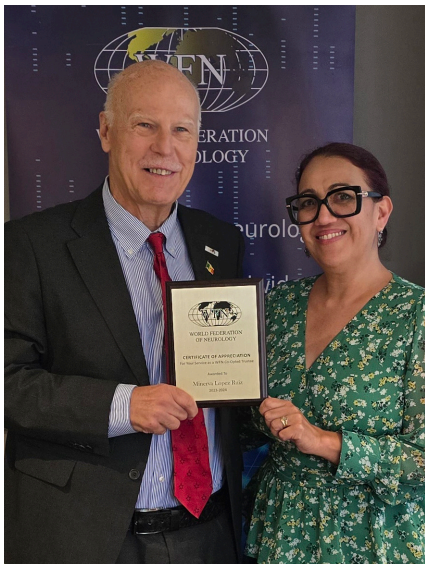
In 11 years, we have established four Training Centers in Africa. From these, we have three four-year training positions in Africa and several one-year fellowship opportunities for epilepsy, general neurology, neuromuscular disease, and stroke. For the last call, we had 165 applicants for a 4-year training position in Cape Town.

We are aware that the WFN Training Centers cannot fill the gap in Africa. However, the WFN Training Centers help to crystallize education, and increasingly other universities have started neurology training programs.

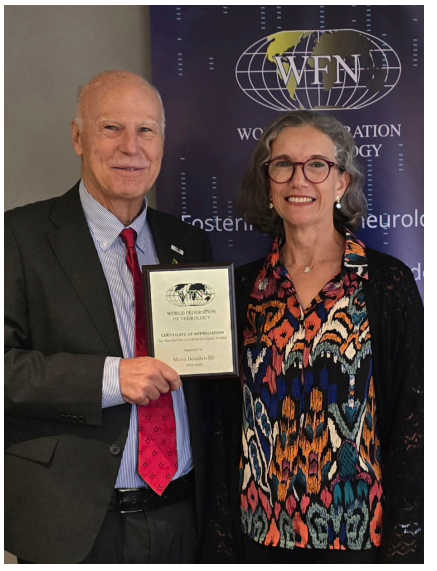
We are open to suggestions and are aware that there is a strong tendency for subspecialization in Africa. WFN Training Centers are selected based on their capabilities to provide excellent inpatient and outpatient services and are connected with a network of other medical and surgical fields to provide excellent training. We already have a large number of **alumni** and are encouraged by the success of our trainees. We are indebted to the **Association of British Neurologists (ABN)** for sharing our costs in Cairo, and to the constant support of the **International Congress on Neuromuscular Diseases** for one training position in neuromuscular disease in Rabat.

see **PRESIDENT'S COLUMN** *page 7*

Prof. Alla Guekht receiving a WFN plaque for her services as a trustee.

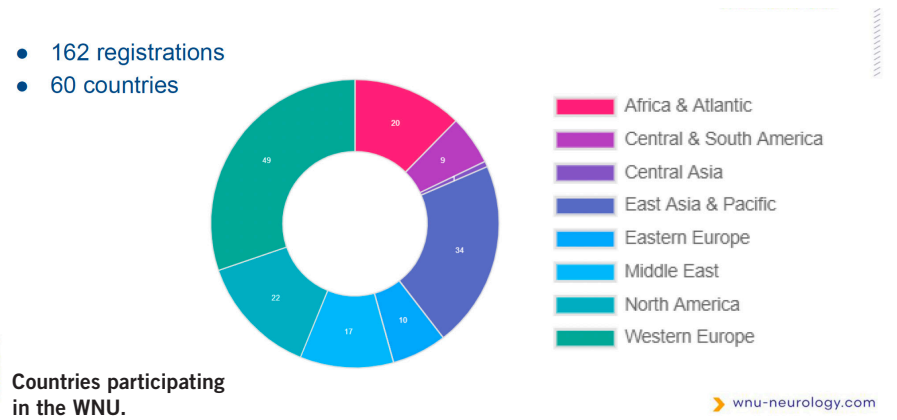


Prof. Minerva Lopez Ruiz receiving a plaque for her service as co-opted trustee representing Latin America.



Maria Benabdeljlil receiving the Plaque for her outstanding services as a co-opted trustee, representing the Arab and African region.

Trustees at their London meeting in September 2024.



Countries participating in the WNU.

First Caucasus Region Course of Neuroepidemiology

The high-level, full-immersion course takes place in December.

BY CARLOS N. KETZOIAN

The First Caucasus Region Course of Neuroepidemiology will take place Dec. 8-14, 2024, in Yerevan, Armenia. It will be the first time the course has taken place in the Asian-Oceania region of the WFN Member Societies.

For years, the Specialty Group on Neuroepidemiology of the World Federation of Neurology (WFN) has promoted specialty courses aimed at young neurologists and health professionals in their first years of training.

These high-level, full-immersion courses allow participants to share five days of training, exchange experiences, and establish professional collaborations that go beyond the course.

Two of these courses took place in Latin America (one in 2018 in Panama, and one in 2023 in Uruguay). Next year, courses are planned to take place in Peru and in Benin, Africa.

The course in Armenia is organized by Yerevan State Medical University, under the auspices of WFN.

The topics will include:

- surveys in neuroepidemiology
- analytic studies, case-control studies
- cohort studies
- clinical trials
- genetic epidemiology
- application of statistics to epidemiology
- inferences from epidemiologic research
- neuroepidemiologic studies in low- and middle-income countries
- geo-epidemiological methods for neuroepidemiologic studies
- diagnostic tests
- how to carry out an epidemiological study in low frequency neurological diseases
- epidemiology of some neurological disorders in the region (dementia, Parkinson's disease, and stroke)

The methodology includes lectures, discussion of examples from different types of studies, and analysis of papers published with different study designs.

Visit the **Yerevan State Medical University website** for more information. You can also **email** Prof. Artashes Tadevosyan at Yerevan State Medical University, Department of Public Health and Health Care Organization.

The Neuroepidemiology Specialty Group is chaired by Pierre Marie Preux. His email address is **preux@unilim.fr.**

Carlos N. Katsoian is a neurologist, epidemiologist, and neurophysiologist from the Neuroepidemiology Section, Institute of Neurology, University Hospital, School of Medicine in Montevideo, Uruguay.

The 10th International Course of Neuroepidemiology

The course includes four days of training and education.

BY CARLOS N. KETZOIAN

The 10th International Course of Neuroepidemiology: Methods and Clinical Applications will take place Nov. 20-24, 2024, at the Ettore Majorana Center for Scientific Culture in Erice, Italy. The World Federation of Neurology (WFN) has endorsed this event.

This historical course of neuroepidemiology originated in 1981 with Prof. Bruce Schoenberg.[1]

Erice's neuroepidemiology courses are an essential point of reference for those who are interested in the subject. Over the years, the structure, thematic content, and methodology have evolved in order to adapt to the changing needs of an international audience and to include methodological developments.

A scientific committee and teaching team, including more than 15 worldwide leaders in neuroepidemiology and other related sciences, will lead the course. It is a high-level, full-immersion course where participants share four days of training, exchange experiences, and establish professional collaborations that go beyond the course.

The topics include:

- surveys in neuroepidemiology
- analytic studies
- clinical trials
- genetic epidemiology
- application of statistics to epidemiology
- metanalysis
- inferences from epidemiologic research
- neuroepidemiology in developing countriespidemiology of some neurological disorders (ALS, dementia, migraine, multiple sclerosis, Parkinson's disease, and stroke)

The methodology includes lectures, discussion of examples from different types of studies, and practical interactive tutorials.

For more information, contact Prof. **Paolo Ragonese** or **Sole Blu Congress Secretariat**.

The Neuroepidemiology Specialty Group is chaired by Pierre Marie Preux. He can be reached at **preux@unilim.fr.** •

Carlos N. Katsoian is a neurologist, epidemiologist, and neurophysiologist from the Neuroepidemiology Section, Institute of Neurology, University Hospital, School of Medicine in Montevideo, Uruguay.

Reference

1. Walter A. Rocca, Paolo Ragonese, Marco D'Amelio, Giovanni Savettieri (2022) Teaching Research Methods to Young Neurologists: The Erice International Courses. *J Mov Disord* 2022;15(3):227-231.

HISTORY

Organ Extracts for Diseases of the Nervous System

A forgotten paradigm involving the pineal gland.

BY PETER J. KOEHLER

Some time ago, I wrote about brain stones, intracranial calcifications that have been found at autopsies for many centuries. (See **World Neurology, January 2017**) In this context, the pineal gland was in the spotlight after the French philosopher René Descartes (1596-1650, see Figure 1) wrote down his ideas about the physical part of the soul supposedly localized in this structure.[1]

In the subsequent 150 years, there were lively discussions between physicians, who were proponents and opponents of this idea. The finding of stones in this organ played an important role. It was only around 1800 — when critical observers began to apply the numerical method, as Pierre-Charles-Alexandre Louis (1787-1872) did for bleeding[2]— that physicians began to realize that discovering a stone in the pineal gland was a normal finding above a certain age. More than 100 years later, there was renewed interest in the pineal gland at a time when extracts from all kinds of organs were used to treat diseases, in particular mental deficiency. The term organotherapy was introduced for this purpose.

Organotherapy

French physician and physiologist Charles-Edouard Brown-Séquard (1817-1894; see Figure 2) came up with the idea of extracting therapeutic fluid from glands.

He and his predecessor at the Collège de France in Paris, physiologist Claude Bernard (1813-1878), who described glucose as an internal secretion of the liver, are considered founders of endocrinology. Brown-Séquard formulated early ideas of glands with internal secretion and experimented with extracts of all kinds of organs.[3,4] He had first suggested administering seminal fluid intravenously to old men in order to rejuvenate them in 1869.[5] Following years of experimentation with gland extracts, including the application of testicular gland extracts on himself — claiming that it had led to improvements in his bodily functions and intellectual faculties — he published a kind of review paper in the *British Medical Journal* (1893). (See Figure 3.)

Figure 1. Drawing of René Descartes by Jan Lievens, 1644-1649. Collection Groninger Museum, on loan from Municipality of Groningen, donated by Hofstede de Groot, Photo © Marten de Leeuw.

Brain Extracts

Brown-Séquard provided the methods to produce the extracts and presented the work that he had conducted on several organ extracts, including the pancreas, liver, thyroid, and sexual organs. Interestingly, he also wrote that "the cerebral or medullary liquid, extracted either from the grey or white matter of the cerebrospinal centers, has been most extensively used." It had been used for the treatment of neurasthenia, locomotor ataxia [tabes dorsalis], and epilepsy.[6] The treatment of neurasthenia — a popular diagnosis at the end of the 19th century[7]— was reported successful in 50% to 60% of patients. Brown-Séquard attributed this effect to the invigoration of the nervous system and the enhancement of cell regeneration.

In the same year, the New York Therapeutic Review published "Injections of Organic Fluids According to Professor Brown-Séquard's Method." It praised the use of organ extracts for the treatment of a range of illnesses — in particular of the nervous system — including chorea, epilepsy, locomotor ataxia, and neurasthenia. It claimed that extract of pancreas could be used to treat diabetes, extract of grey matter could treat neurasthenia, and testicular extracts could be used to treat a range of diseases.[4] However, as definitions of diseases were not always clear, scientific criticism was not long in coming. Solomon Solis-Cohen (1857-1948),

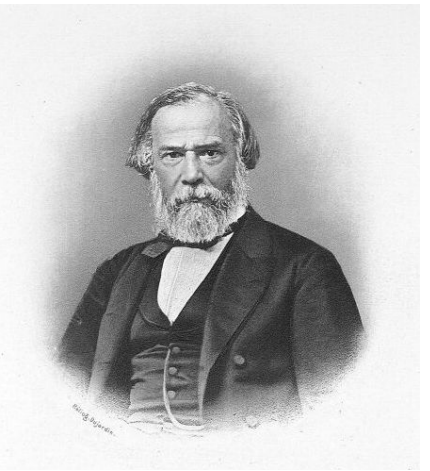
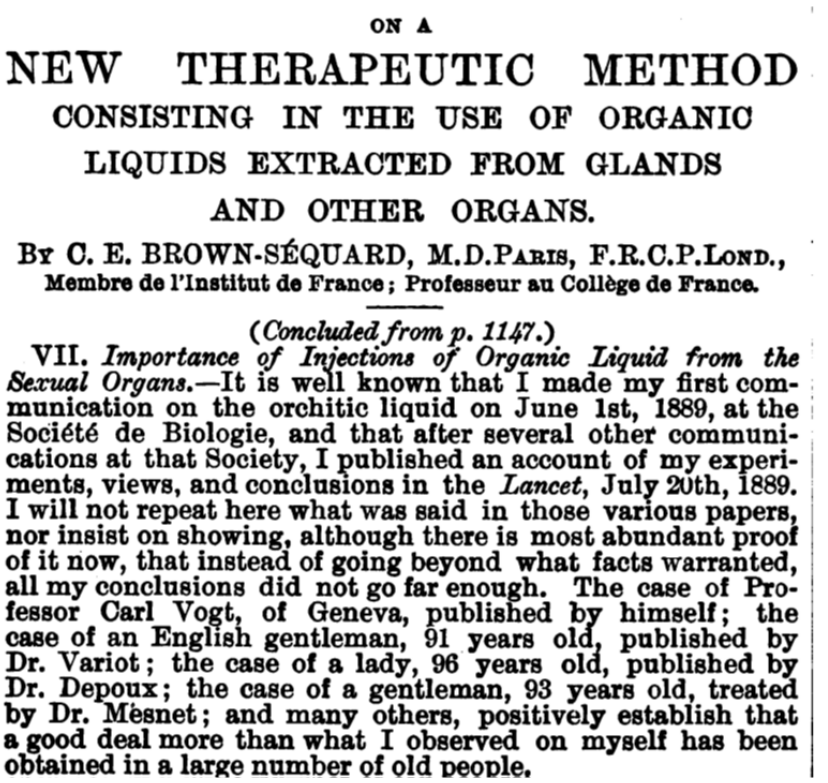


Figure 2. Portrait of Charles-Édouard Brown-Séquard (© Bibliothèque Interuniversitaire Santé).



ON A

NEW THERAPEUTIC METHOD

CONSISTING IN THE USE OF ORGANIC LIQUIDS EXTRACTED FROM GLANDS AND OTHER ORGANS.

By C. E. BROWN-SÉQUARD, M.D.Paris, F.R.C.P.Lond.,
Membre de l'Institut de France; Professeur au Collège de France.

(*Concluded from p. 1147.*)

VII. *Importance of Injections of Organic Liquid from the Sexual Organs.*—It is well known that I made my first communication on the orchitic liquid on June 1st, 1889, at the Société de Biologie, and that after several other communications at that Society, I published an account of my experiments, views, and conclusions in the *Lancet*, July 20th, 1889. I will not repeat here what was said in those various papers, nor insist on showing, although there is most abundant proof of it now, that instead of going beyond what facts warranted, all my conclusions did not go far enough. The case of Professor Carl Vogt, of Geneva, published by himself; the case of an English gentleman, 91 years old, published by Dr. Variot; the case of a lady, 96 years old, published by Dr. Depoux; the case of a gentleman, 93 years old, treated by Dr. Mésnet; and many others, positively establish that a good deal more than what I observed on myself has been obtained in a large number of old people.

Figure 3. Brown-Séquard's publication in the *British Medical Journal* of 1893

professor of clinical medicine and applied therapeutics at the Philadelphia Polyclinic, criticized the use of brain extracts. Unlike the thyroid gland, he wrote that "the brain, so far as we know, secretes nothing physical. So far as we know, there is no symptom or symptom-complexus which can be attributed to defect in any supposed secretory function of the brain."[8]

Chastity Gland

In his informative article on the history of ideas on the pineal gland, neurologist and medical historian Francis Schiller (1909-2003) pointed to another connection with endocrinology.[9] In 1898, Otto Heubner (1843-1926, eponymist of Heubner's recurrent artery) described a 4-year-old child suffering from *pubertas praecox* — the premature development of primary and secondary sexual characteristics — caused by a pineal gland tumor. Ideas arose as to whether the pineal gland might have an inhibiting effect on sexual development.

In the early 20th century, the Viennese neurologist Otto Marburg (1874-1948) suggested the pineal gland functions in normal conditions as a *Keuschheitsdrüse* [chastity gland], suppressing the premature development of sexual characteristics.[8] The American neurosurgeon Harvey Cushing (1869-1939) pointed out an antagonism with respect to human sexual development between the pineal gland (*epiphysis*) and the pituitary gland (*hypophysis*), not only with respect to their position above and below the brain, but also in function when it comes to tumors. (See Figure 4.)

Tumors of the pineal gland would cause premature development of primary and secondary sexual characteristics, whereas those in the pituitary gland would destroy hormonal regulation and lead to the contrary. In 1912, Cushing wrote: "[The pineal gland] is undoubtedly of physiological importance ... it would appear that there is a measure of antagonism, insofar as sexual development is concerned, between hypophysis and epiphysis. However, it must be confessed that the syndrome of supposed pinealism has been observed only in connection with tumors of the gland which have led to an obstructive hydrocephalus and thus of necessity to secondary hypophysial disturbances."[8]

Pineal Gland Extract for Mental Disability

In his book *The Origins of Organ Transplantation*, medical historian Thomas Schlich wrote that "organotherapy was generally rejected around 1900, since neither the clinical data nor the experimental results were considered adequate evidence for its effectiveness."[5] However, in neurology as well as psychiatry, organ extracts continued to be applied. The term endocrine psychiatry has been applied to the latter.

In the 1910s, researchers H.H. Goddard and Walter S. Cornell in Vineland, New Jersey, working under Charles Loomis Dana (1852-1935), professor of nervous diseases at Cornell Medical College, New York, and physician William Nathaniel Berkeley (1868-1928), author of *The Principles and Practice of Endocrine Medicine*

see **HISTORY** *page 6*

HISTORY

continued from page 5

(1926), studied the function of the pineal gland. They were interested in feeding experiments.[12] Pineal gland abstract was given orally to 25 children. Each child was paired with a control who was not given treatment. After two months, the effect was not clear, and the experiment was extended for another two months. They concluded that "one cannot but feel that there is a distinct influence in the extract toward mental power." They compared it with the influence of thyroid extracts on children suffering from congenital iodine deficiency syndrome.[13]

Meanwhile, Berkeley published on improvements he had achieved with "the use of pineal gland in the treatment of certain classes of defective children" and in 12 patients with pre-senile dementia.[14,15] The Austrian philosopher and esotericist, founder of anthroposophy, Rudolf Steiner (1861-1925) prescribed pineal gland extracts for children with mental disabilities.[9]

Pineal Gland Extract for Psychosis

It was also administered to psychotic patients as was recently reviewed in "Organ Extracts and the Development of Psychiatry: Hormonal Treatments at the Maudsley Hospital 1923-1938."[16] No less than 17 studies on pineal gland extracts for schizophrenia were found before 1950.[8]

In 1921, the Nederlands Tijdschrift voor Geneeskunde reviewed a study on the pineal gland, reporting its influence on psychic functions. In some types of insanity — in particular schizophrenia — extracts of the gland were believed to inhibit signs of sexual overstimulation. Apparently, the drug was available under the name Epiglandol.[17] The interest in a possible relationship between schizophrenia and the pineal gland did not terminate after the discovery of the secretion of melatonin in 1958.[18,19] •

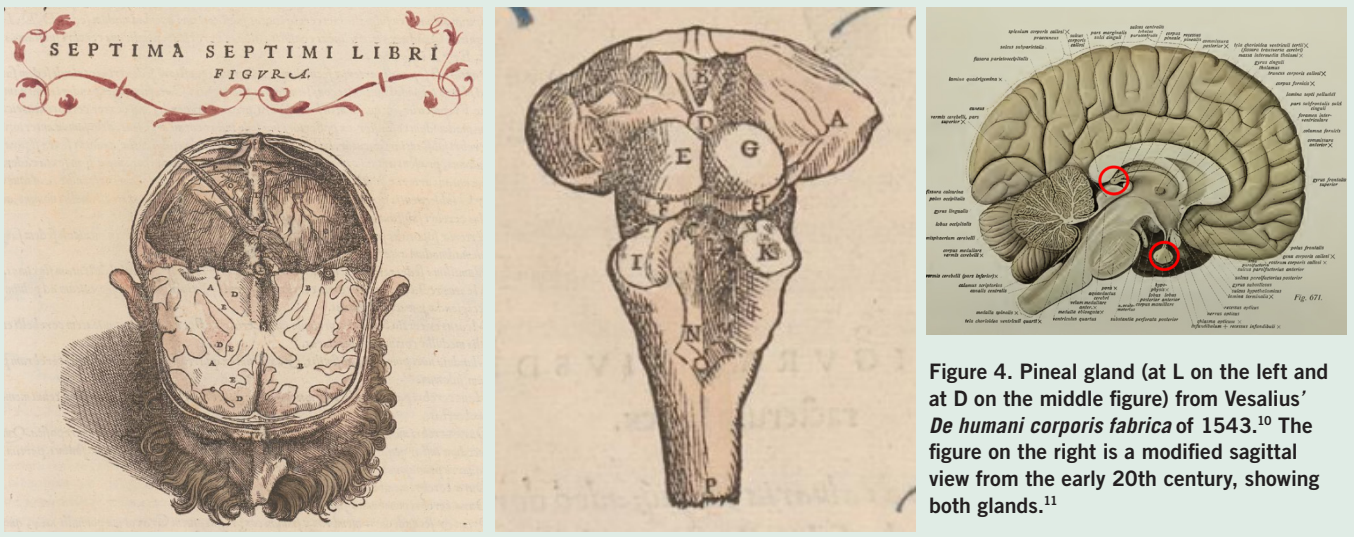


Figure 4. Pineal gland (at L on the left and at D on the middle figure) from Vesalius' *De humani corporis fabrica* of 1543.[10] The figure on the right is a modified sagittal view from the early 20th century, showing both glands.[11]

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Prof. Bruno Giometto and Prof. Wolfgang Grisold opening the neuroscience program in Trento, Italy.

PRESIDENT'S COLUMN

continued from page 3

Empower the Regions

In addition to the careful selection of Training Centers, regular communication and updates are necessary. We plan to visit all the African WFN Training Centers in 2024 as well as the Latin American center in Mexico City. This year, we have already visited Cairo and Dakar and were impressed by the spirit and activities of those Training Centers. Moreover, we had the opportunity to speak with trainees and the local staff.

We are planning to visit Rabat and Cape Town this year and will be reporting on those visits and impressions soon in the *JNS* service pages. These will be formal site visits, speaking with trainers and trainees and looking at the opportunities and results of the past years. The visitation committee will consist of the co-chair of the Education Committee along with WFN Secretary General Prof. Steven Lewis and myself as the president of the WFN.

During our discussions with member societies, the idea was presented that young neurologists from high-income countries should be given the opportunity to spend time in low-income countries to learn from them and contribute their own knowledge on a local and regional level. We will develop this as a project with a small committee.

Young neurologists are heavily involved in some WFN committees, in particular in education, where the core curriculum is advancing. We seek further possibilities to extend this, but we know that it must be implemented on a solid foundation and will take time.

Education should start among students, and the WFN is grateful for the cooperation of the International Federation of Medical Students. An interesting initiative is a neuroscience training course for medical students, which was created by Prof. Bruno Giometto at the University of Trento in Trento, Italy. A detailed report will be published in the WFN **Service Pages**.

World Brain Day 2025 will focus on brain health, in combination with a subtopic, which is still being discussed. We believe brain health is a powerful summary of activities in neurology. For example, several countries in Europe have incorporated the concept of brain health into their national health policies. This could be a template for many parts of the world to deal with the issues of brain health, equity and access, healthy lifestyle, and implementation of sustainable development goals (SDGs). It may be an important step in the future and help all member societies to promote neurology.

Global Activities

Our global activities with the WHO continue to focus on promoting the IGAP, the Brain Health initiative — **Defeating Meningitis by 2030**, and promoting the use and implementation of the **WHO Essential Medicines List (EML)** globally. The WHO and U.N. sections of our website contain lists of **WFN-WHO** and **WFN-Economic and Social Council (ECOSOC)** activities from 2023 and 2024. The work with the WHO and the U.N. ECOSOC takes a lot of responsibility and time. We thank Prof. Guekht, our past trustee, and Ksenia Pochigewa, our WFN intern, as well as the London office for making this possible.

Our most recent WHO activity was our participation at the **WHO Mental Health Forum 2024** on Oct. 9-10, in Geneva, Switzerland.

Mental health is closely connected with neurology. The designation of the WHO unit, **Mental Health, Brain Health, and Substance Use**, emphasizes this close relationship. The WFN had two interventions at this meeting: one on the cooperation between the WFN and the WHO, and another to promote IGAP. Many interactions with multiple stakeholders took place and reaffirm the presence and activity of the WFN in promoting neurology on a global stage.

2025 will be an important year for the WFN in regard to elections and leadership, the WCN in Seoul, educational activities such as the recently launched GALP projects, and plenty of other projects within the organization.

Please continue to follow us on our **website** and in our newsletter and journals. •

WHO meeting on mental health in Geneva. Prof. Grisold speaking on the implementation of the IGAP.

Prof. Marco Tulio Medina Recognized

Award given for contributions to epilepsy in Latin America.

Prof. Marco Tulio Medina, previous president of the Pan American Federation of Neurological Societies and previous co-opted trustee of the WFN, was recognized by the International League Against Epilepsy (ILAE) Latin American Commission, on June 15, 2024, in Santa Domingo in the Dominican Republic. He was acknowledged for his leadership, work, and contribution to the ILAE vision and mission in the Latin American region. •

WORLD BRAIN DAY

World Brain Day From 2014-2024

Reviewing the themes and progress of World Brain Day through the years.

BY PROF. TISSA WIJERATNE

The annual World Brain Day (WBD) campaigns from 2014 to 2024 have significantly advanced global awareness and advocacy for neurological health. Each year, the campaign has focused on a specific theme, addressing critical neurological issues and fostering global collaboration among health care professionals, policymakers, and the public.

TISSA WIJERATNE

The journey began in 2014 with "Our Brain, Our Future," establishing the importance of prioritizing brain health worldwide. Subsequent campaigns have spotlighted epilepsy (2015), brain health in aging (2016), stroke prevention (2017), the impact of air pollution on brain health (2018), migraine management (2019), Parkinson's disease (2020), and multiple sclerosis (2021). These initiatives have not only raised awareness but also promoted preventive strategies and innovative treatments tailored to each condition.

In 2022, the campaign expanded its focus to "Brain Health for All," emphasizing the global necessity of promoting brain health for overall well-being. The 2023 campaign addressed "Brain Health and Disability," highlighting the need for early intervention, access to rehabilitation services, and social inclusion for those with neurological conditions.

The 2024 campaign has taken a decisive step by advocating for brain health and prevention in direct alignment with the WHO's Intersectoral Global Action Plan (IGAP) on Epilepsy and Other Neurological Disorders. This year's focus underscores the importance of implementing the WHO IGAP toolkit, which provides a comprehensive framework for prevention, early diagnosis, and equitable access to care. By promoting these strategies, the campaign aims to reduce the global burden of neurological disorders and enhance the quality of life for individuals affected by these conditions.

These campaigns have played a crucial role in advancing the global conversation on brain health, influencing policies, and improving lives. The success of these initiatives is a testament to the tireless efforts of member neurology societies worldwide.

On behalf of the global neurology community, we extend our deepest gratitude to all the member neurology societies for their unwavering support and commitment. Your collaboration and dedication have been instrumental in making these campaigns impactful and meaningful, contributing to a future where brain health is prioritized for all. Together, we continue to work toward a world where everyone can achieve and maintain optimal brain health. •

Prof. Tissa Wijeratne is co-chair of World Brain Day.

Making a Difference Down Under

An Australian high school student celebrates World Brain Day 2024.

BY SARAH MCPARTLAND

I was inspired by Prof. Tissa Wijeratne, co-chair of World Brain Day, to develop a template for how our school community could raise awareness about the 10 vital steps ("Life's Ten") to good brain health through the "Brain Health and Prevention" campaign. This initiative served a dual purpose: educating our student body and uniting us in a fun and meaningful way to not only learn but also raise funds for this important cause.

As school captain, I brought this idea to our student senate meeting, and I was thrilled by the overwhelming support from my fellow students and the senior staff within our leadership team. We've since created a poster that will be displayed throughout the school leading up to the events we've planned.

Brain health is crucial for laying the foundation for future well-being. Simple preventative steps, like eating healthy or getting enough sleep, can protect young brains from cognitive decline and neurological conditions later in life. By establishing these good habits now, our generation can enhance our learning abilities and improve our quality of life as we age.

Every weekend, I visit my grandfather, who suffers from vascular dementia and Alzheimer's disease. Seeing others in his senior care facility who are unable to speak or move without a nurse's assistance has deeply affected me. Knowing that we can equip the next generation with proactive and practical ways to prevent such a decline in quality of life motivates me. This knowledge has the potential to significantly reduce the number of individuals facing cognitive decline in the future.

Our goal is to pioneer brain health education within our school by implementing a Brain Health Week. Each day of this week will focus on two of the 10 essential steps for maintaining healthy cognition. We want to ensure that students understand these steps and can apply them practically in their daily lives. These steps will support their learning, decision making and long-term cognitive health.

The week will culminate in a pajama day fundraiser on Friday, highlighting the importance of adequate sleep as a preventative measure. The funds raised will be donated to a brain health charity, allowing students to not only learn how to maintain good brain health themselves but also contribute to research aimed at preventing cognitive decline.

Through these efforts, our leadership team hopes to empower students to maintain optimal cognitive function throughout their lives. •

Sarah McPartland

Sarah McPartland is year 12 school captain of Melton Christian College in Melton, Victoria, Australia.

WORLD BRAIN DAY

World Brain Day 2024 in Tunisia

Event themed around stroke – a leading cause of disability in Tunisia.

BY PROF. RIADH GOUIDER

RIADH GOUIDER

The Tunisia World Brain Day event, held on July 10, 2024, in Tozeur under the patronage of the Minister of Health, focused on the prevention of disability which, along with stroke, was theme of the event.

Stroke is a leading cause of disability and mortality in Tunisia. Telethrombolysis, a method that enables the indication and administration of thrombolytic treatments via telemedicine, offers a promising solution for improving stroke management in underresourced areas without access to neurologists. The purpose of this event was to advance understanding and practices related to telethrombolysis and its critical role in stroke care and preventing disability. Speakers included many heavyweights in neurology.

- Prof. Wolfgang Grisold, president of the World Federation of Neurology (WFN), provided an online opening and presented a global perspective on neurology. He also expressed the WFN's support for initiatives aimed at enhancing neurological care all over the world.
- Prof. Valeria Caso, past president of the European Stroke Organization (ESO) and board member of the World Stroke Organization (WSO), shared international case studies and experiences in telethrombolysis, illustrating the global relevance of this approach.
- Prof. Riadh Gouider, president of the Tunisian College of Neurology and Neurosurgery, detailed recent innovations in telemedicine within Tunisia and their impact on stroke care.
- Prof. Chokri Mhiri, head of the department of neurology at the University of Sfax, presented an update on the current practices and advancements in thrombolysis.
- Prof. Mariem Damak of the University of Sfax, Dr. Habib Haguiga, emergency physician in Tozeur, and Prof. Habiba Mizouni of La Rabta Hospital in Tunis, discussed guidelines and challenges in stroke care in Tunisia and elaborated on the objectives and progress of the telethrombolysis project.
- Prof. Didier Smadja, from Paris,

highlighted the urgent need to expand telestroke services through national and international collaborations and the establishment of a telethrombolysis network that would connect health centers across Tunisia with Tunisian and international experts. This network would aim to improve clinical outcomes, reduce disparities in access to care, and promote expertise in neurovascular pathologies among Tunisian neurologists. If this pilot project proves successful, it could be extended throughout Tunisia and potentially to other African countries.

The event also marked the inauguration of a local telethrombolysis pilot project, which is a collaborative effort involving three teams: the Emergency Department of Tozeur, the radiology team from Rabta in Tunis, and the Neurology Department of Habib Bourguiba Hospital in Sfax. •

Prof. Riadh Gouider is co-chair of the WFN Education Committee and past WFN trustee.

A Neurology Teaching Course in Uganda

International collaboration provides a potential future platform for bilateral knowledge exchange.

BY DILRAJ SINGH SOKHI

DILRAJ SINGH SOKHI

The dire lack of neurologists in Africa has been well documented over the decades. However, the situation has, unfortunately, scarcely changed. Uganda has six neurologists for a population of 47 million. Although there are growing multifaceted movements on the continent to address this workforce gap, it would take generations to reach levels stipulated by the World Health Organization (WHO).

There are a handful of postgraduate neurology training centers in the region, but only one in East Africa (Nairobi, Kenya) and none in Uganda. Education about the nervous system needs to continue and expand in the region, especially given its disproportionately large burden of neurological disease. Innovation is thus required in delivering this education, and we outline here one such successful endeavor in Uganda.

The Organization of Islamic Cooperation (OIC) is an intergovernmental organization with a membership of 57 states spread over four continents. It aims to promote international peace and harmony globally, including through supporting scientific knowledge exchange via its Standing Committee on Scientific and Technological Cooperation (COMSTECH). The Science, Technology and Innovation (STI) arm of COMSTECH recognizes the need for improving medical sciences knowledge dissemination. In this regard, it brought three neurologists together to deliver a one-day certificate course in neurology at two centers in Uganda that would normally not have regular access to neurology expertise.

Our first stop was the Equator University of Science and Technology (EQUSaT), which was founded in 2021 through mutual agreement between the Republic of Uganda and the University of Lahore in Pakistan. The pioneering medical and dental students had recently commenced their clinical rotations, and it was an opportune time to discuss and demonstrate the clinical skills required for assessing patients with neurological conditions.

We presented a blended variety of talks, from didactic lectures to case-based hands-on teaching. The timetable covered the spectrum of neurology, including neurocritical care elements, from clinically relevant neuroanatomy and neuroimaging to topic-based lectures and discussions on the most common conditions (as identified by the Global Burden of Disease findings): epilepsy, headache, infections of the nervous system, and stroke. Students and doctors from neighboring colleges and hospitals were invited, and we undertook pre- and post-course evaluations to help learners assess the impact the course made on their neurology knowledge.

We replicated the workshop in the more established OIC-cofounded Islamic University in Uganda (IUIU), at the Habib Medical School in Kampala. The chief guest was the Deputy High Commissioner of Pakistan in Uganda, His Excellence Bilal Abdul Mohsin. The efforts of delivering the course were recognized as a potential future platform for ongoing bilateral knowledge exchange, collaboration, and innovation, as well as strengthening the bonds between Pakistan and Uganda.

Aga Khan University in Karachi already delivers an annual online certificate course in neurology, which is open for anyone to enroll at a modest price. However, neurology remains a clinical specialty. Therefore bedside teaching and examination remain a vital part of training, as we did in the courses in Uganda. Simple but impactful multi-country ventures such as these are important examples of how to extend the reach of neurology education in resource-limited settings such as East Africa. They are well aligned with the educational mission of the World Federation of Neurology. •

Dr. Dilraj Singh Sokhi is associate professor and associate fellowship director of neurology at Aga Khan University in Kenya.

BRAIN HEALTH

continued from page 1

- Symposiums on physiology and pathology of brain disease (Chair: Prof. Riki Matsumoto), Asian studies in posterior cortical atrophy (PCA) (Chair: Prof. Kyoko Suzuki), cerebral amyloid angiopathy (Chair: Prof. Akihiro Sindo), and PET imaging (Chair: Prof. Masaru Mimura).

Science Bridges Cultures

Learning from Japanese scientists in their homeland while immersed in their cultural heritage was a unique experience. It underscored the importance of the ADCD meetings to continue rotating around the world to favor multicultural exchange and inclusive and diverse behavioral neurology.

Diversity was indeed a central and transversal element with a tangible presence during the meeting. There were specific symposiums about cross-cultural investigations in frontotemporal dementia and primary progressive aphasia (PPA), chaired by Prof. Olivier Piguet, semantics in Alzheimer's disease and PPA with strong emphasis on language diversity, chaired by Prof. Jet Vonk, and a symposium on diversity, disparity, and precision science in brain health, chaired by Prof. Suvarna Alladi. In this diverse context, we learned about the International Network for Cross-Linguistic Research on Brain Health (INCLUDE), which aims to foster cross-linguistic research on brain disorders to identify generalizable markers.

Prof. Carlo Semenza delivered the second day's plenary talk on the contributions of the right hemisphere to calculation. Prof. Lisa Cipolotti chaired a symposium on recent research into executive function and reading, and Prof. Peter Nestor chaired sessions on PPA due to AD pathology. The latter symposium covered automated analysis of speech in biologically confirmed PPA, linguistic and imaging features in AD-related PPA, and core impairment of logogenic variant PPA.

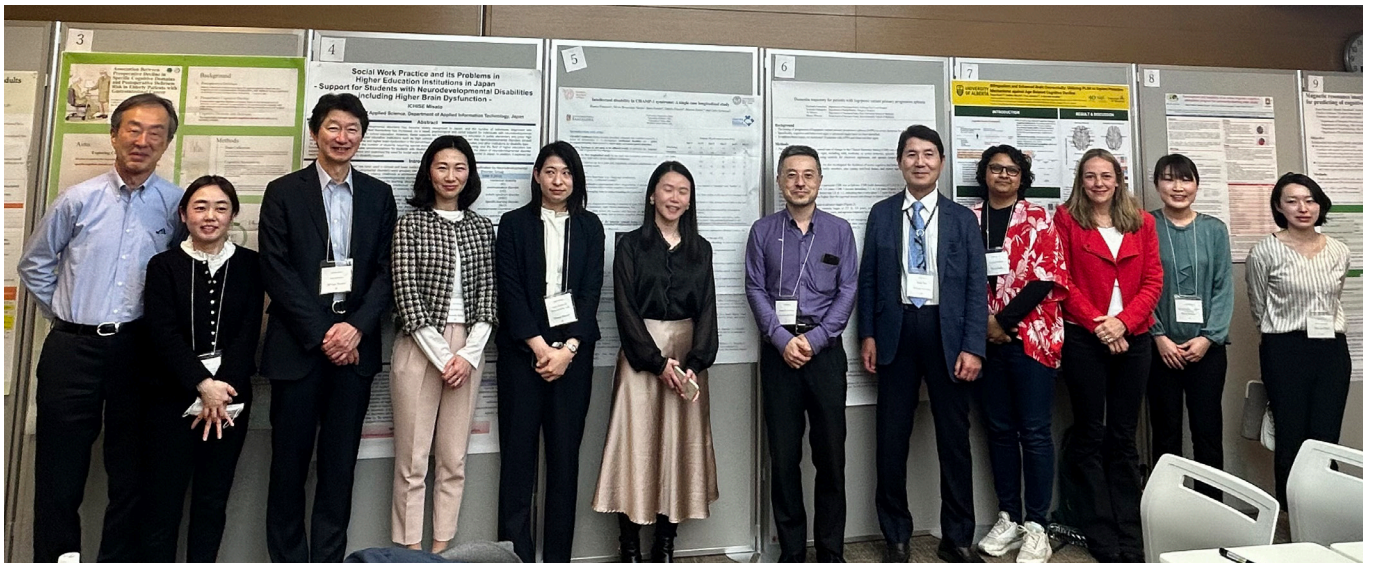
The cerebral small vessel diseases (SVD) symposium — chaired by Dr. Masafumi Ihara and Prof. Raj Kalaria — covered the clinical, imaging, and physiopathology of SVD, CADASIL, CARASIL, and outcomes of young stroke survivors. Dr. Morris Freedman chaired the Virtual Behavioral Medicine Symposium in which his team presented the development and implementation by Baycrest Health Sciences of a novel model of care for neuropsychiatric symptoms in severe dementia in Ontario, Canada. Dr. Aida Suarez-Gonzalez and Prof. Peter Nestor, behavioral interventions and rehabilitation chairs, were featured in six talks on PCA, AD, aphasia, and behavioral and neuropsychiatric symptoms.

We also had a taste of noh dance and the art of ikebana alongside delicious Japanese gastronomy at the welcome dinner and throughout the conference. Many early career researchers presented, and on the last day, the poster session by young international researchers was a highlight. To quote Prof. Hitomi Sato from Tokyo, "Like the cherry blossoms, the conference was in full bloom with each passing day."

Fruitful scientific discussion and networking continued outside official conference hours in group walks around pagodas, zen gardens, and Shinto shrines. We know that the seeds of a few international collaborations were planted in those walks under vermillion torii gates.

During the business meeting, new chair Dr. Aida Suárez-González took over from Prof. Suvarna Alladi, Prof. Manabu Ikeda was appointed new co-chair, and the executive committee was renewed, including members from Southeast Asia, Western Pacific, Europe, North and South America, and Africa.

The location of the 2026 meeting is Australia. Thanks to Prof. Peter Nestor who has volunteered to organize the meeting in the Gold Coast. In December 2024, we will travel to Nairobi to support the activities of our colleagues at the African Dementia Consortium. We will return to Asia in the autumn of 2025 to celebrate the XXVII World Congress of Neurology in Seoul. •



Local organizers (left to right) Prof. Manabu Ikeda, Prof. Masaru Mimura, and Dr. Yutaka Tanaka with early career researchers and Dr. Boon Lead Tee (center), posters session chair, at the poster presentation.

Attendees pose with Noh dancers after a performance (a classical Japanese dance drama) at the conference venue.

(Left to right) Jagger Smith, Prof. Suvarna Alladi, Dr. Aida Suárez-González, Deb Galet, and Prof. Morris Freedman at the conference venue.

Dr. Aida Suárez-González is principal research fellow and consultant clinical neuropsychologist at UCL Queen Square Institute of Neurology, UCL, in London, U.K. Morris Freedman is professor in the department of medicine (neurology) at University of Toronto, head of the division of neurology and medical director of the Pamela and Paul Austin Centre for Neurology and Behavioral Support at Baycrest in Toronto, Canada. Manabu Ikeda is professor of psychiatry and chair of the department of psychiatry at Osaka University in Osaka, Japan. Dr. Yutaka Tanaka is director of Tanka Clinic in Nara, Japan. Masaru Mimura is professor emeritus at Keio University and past chair of the department of neuropsychiatry in Japan. Prof. Suvarna Alladi is professor of neurology at the National Institute of Mental Health and Neurosciences (NIMHANS) in Bangalore, India.