

# WORLD NEUROLOGY

THE OFFICIAL NEWSLETTER OF THE WORLD FEDERATION OF NEUROLOGY

## Tropical Neurology: INTROPICON 2018

BY PROF. CHANDRASHEKHAR MESHAM,  
NAGPUR, INDIA, AND PROF. RAAD SHAKIR,  
LONDON.

The second International Tropical and Geographical Neurology Conference (INTROPICON) was held in conjunction with the 28th Brazilian Congress of Neurology and the 15th Pan American Congress of Neurology Oct. 11-14, 2018, in Sao Paulo, Brazil. The congress was huge and was attended by more than 3,800 delegates from all over Latin America and across the world.

The Tropical and Geographical Neurology Applied Research Group of the World Federation of Neurology (WFN) is the oldest group, established in 1961, and has had many meetings over the years. This congress was decided following the reconstruction of the research group in Mumbai during INTROPICON in 2017. The chair of the research group is Dr. Chandrashekhhar Meshram from Nagpur, India. This second congress was co-chaired by Dr. Meshram and the late Prof. Amilton Barreira, Sao Paulo, Brazil.



Delegates from around the world attended the second International Tropical and Geographical Neurology Conference in Sao Paulo, Brazil.

It is with great sadness that the whole world of neurology, and in particular tropical and Latin American neurology, will sorely miss Prof. Barreira. His contributions were immense.

INTROPICON 2018 covered the field with fascinating presentations on a

variety of topics. The congress featured an in-depth look at cysticercosis, amebic encephalomyelitis, cerebral malaria, Chagas disease, schistosomiasis, toxoplasmosis, trypanosomiasis, cerebral venous thrombosis in India, paracoccidiodomycosis, arboviruses, Zika virus status,

congenital Zika virus, chikungunya, dengue status in Latin America and Asia, yellow fever, and vaccinations for arboviruses. Videos of live cysticerci floating in the third and lateral ventricles seen on endoscopy were mesmerizing.

see INTROPICON, page 3

## World Stroke Day 2018: BEYINDER

BY DERYA ULUDUZ

The Turkish Stroke Patient Society (BEYINDER), a member of the Stroke Alliance for Europe (SAFE), organized the first symposium for stroke survivors and their caregivers in Turkey on World Stroke Day 2018, acknowledging the importance of acute management in stroke, long-term commitment, and attention to the needs and rights of stroke patients for better outcomes. The full day symposium was titled “İnme Hasta ve Hasta Yakınları Sempozyumu,” which is Turkish for the “Symposium of the Stroke Survi-

vors and Their Caregivers.”

BEYINDER was founded in 2017 and became a member of SAFE shortly after. We have strong collaborations with SAFE to raise awareness with respect to strokes. Every year, 15 million people suffer strokes worldwide, and it is the leading cause of disability. BEYINDER also publishes a *stroke magazine* for patients every three months.

The symposium, organized at the Altunizade Event Center in Istanbul, was attended by stroke survivors and their caregivers with the participation of health directors and heads of emergency services. The most important target of this event was the public; we created simple messages to promote via social media, newspapers, and press. The event relevance and the topics of the sessions

see WORLD STROKE DAY, page 2



### INSIDE

#### FEATURES

##### 12-MONTH DASHBOARD REPORT

Update from the WFN president.

PAGE 2

##### NEUROLOGY IN MIGRANTS MEETING

Although most human migration is in search of better opportunities, it comes with health concerns.

PAGE 2

##### ADVANCES IN NEUROSCIENCE

New strategies for preventing and treating brain diseases.

PAGE 5



PRESIDENT'S COLUMN

# 12-Month Dashboard Report

**A**s I write this first column for 2019, the business of the World Federation of Neurology (WFN) is well under way. It is, however, the first anniversary of the new administration, and I will therefore present a dashboard, or update, of where we are at this point.



WILLIAM CARROLL, MD

same process under the direction of the Secretary-General Wolfgang Grisold. The website is now also under more regular and systematic review to ensure that information is current. Through the efforts of Walter Struhala and his committee, e-communications using social media have increased in volume and professionalism.

An important part of the office and website changes is the development of *uniform internal and external branding*. A draft document currently before the trustees details logos, brands, and symbols that can be used and how they must be used. It is hoped that this will improve the recognition of WFN material. All office staff have participated in these revisions and improvements.

Finally, *operational procedures and policies* have been revised and, in instances, clarified. Regional teaching center memorandums of understanding (MOUs), WFN loans for educational meetings sought by Specialty Groups, and guidelines for applying for research grants have been implemented and/or revised to bring improved clarity and accessibility.

### Trustees

Moving to the trustees: They continue to meet by conference call each month. All have a particular area of responsibility within the WFN aside from their general duty of guiding the organization. The Council of Delegates meeting held during the Berlin European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) meeting saw the election of **Dr. Alla Guekht** as one of three elected

trustees. She replaced **Dr. Morris Freedman**, who had made notable contributions to the educational efforts of the WFN, particularly in the electronic form, and for which we owe him considerable thanks. He continues to serve as chair of the membership committee, for which we are also most appreciative. Also, the Secretary-General, Dr. Wolfgang Grisold, was reelected for another term.

### Strategic Issues

The trustees have dealt with and are continuing to deal with several *strategic issues*. These include the *Global Neurological Alliance (GNA)*, about which I have written previously. With the release of the latest global burden of neurological disorders (*Lancet Neurology* 2018) showing the considerable rise in numbers of people affected by neurological noncommunicable diseases, the GNA is likely to have a pivotal role in the relationship with the WFN and in turn its relationship with the World Health Organization (WHO). It is worth mentioning that the revised International Classification of Disease (ICD11), is due to be released this year, with the major change being the reclassification of stroke as a brain disease rather than a cardiovascular disease. At the January executive board meeting of the WHO in Geneva, the WFN took the opportunity to post a statement on this matter. Other posts published during this meeting included those on combating noncommunicable diseases, access to medicines, the action plan for epilepsy, and World Brain Day as part of the WHO review of world health days.

In addition to these matters, the WFN has been active in other global health



matters, most notably WHO conferences on dementia (attended by Riadh Gouider), the Regional WHO meeting in September in Rome, and the WHO general assembly in New York (attended by Wolfgang Grisold), and the Global Burden of Neurological Disorders World Summit (which I attended).

### World Congress of Neurology: Dubai

In closing, allow me to remind everyone of this upcoming World Congress of Neurology to be held Oct. 27-31, 2019, in Dubai. It will be a most fulfilling educational experience for all, and I urge everyone to encourage younger colleagues and trainees to attend. Provision has been made for all levels of accommodation, and travel grants and bursaries will be as abundant as they were for the Kyoto meeting. Visas will be procurable for all. If in doubt on any of these matters, please visit the WFN/WCN website, or contact Jade at the London office of the WFN or Tami Gaon of Kenes, the point of contact for the WFN. •

### London Office

To deal first with the heart of the WFN, I will summarize the state of the London office. A new computer-based calendar system known as *Asana* has been employed successfully.

It provides a common base for the office, individuals within the office, and trustees and committee chairs as required. Also, projects related to different calendar times or that operate throughout the year can be allocated to members of the team. Not only does it provide a readily accessible timeline for all projects, it also records the operating framework for all WFN activities. It should provide the flexibility to enable any team member to step into the role of any other team member at the same level of operational competence.

Thus far, it has been of considerable assistance, and I am sure we will develop its use even more profitably over time.

During this last year, a review of the website and its contents has been undertaken. Sections of the website have been updated, and others, including those related to committees and Specialty Groups (formally known as Applied Research Groups), particularly their roles and responsibilities, are currently undergoing the

## WORLD STROKE DAY

continued from page 1

(importance of primary prevention, emergency management interventions, and life after stroke for better outcome) were appraised by the TV channels, social media, news agencies, and newspapers. They focused on our activity on their main bulletins.

The main aim of this symposium was to provide close collaborations between stroke survivors, stroke neurologists, and policymakers to solve the main problems. In one of the sessions, we gave the microphone to the patients and discussed the problems they experienced and the needs of those patients. The second important target for this event was policymakers and the Ministry of Health. BEYINDER is now working to prepare a report about the conclusion of the symposium and the tribulations of those patients, and will contact the Ministry of Health to discuss and facilitate the solutions.



### SOCIAL MEDIA

- www.posta.com.tr
- www.medimagazin.com.tr
- www.dha.com.tr
- m.hurriyet.com.tr
- www.aa.com.tr
- www.beyinder.org
- m.haberturk.com

### IN MEMORIAM

The following was distributed by the Indian Academy of Neurology.

It is with deep sorrow and regret that we inform you about the demise of Professor Jagjit S. Chopra, the founder President of the Indian Academy of Neurology on Jan. 19, 2019. He was the driving force in the formation of the IAN and the person who guided it to maturity.



He had a profound influence on the development of the academy as well as the professional careers of many members of the IAN.

Our prayers and thoughts are with the family members, friends, and students of Prof. Chopra.

— Satish Khadilkar, President, IAN, and Gagandeep Singh, Secretary, IAN



# Neurology in Migrants Meeting

BY PROF. MUSTAPHA EL ALAOUI FARIS, CHAIR OF THE WFN MIGRANT NEUROLOGY APPLIED RESEARCH GROUP IN MARRAKECH, MOROCCO

The meeting of the World Federation of Neurology (WFN) Migrant Neurology Applied Research Group took place Dec. 14, 2018, in Marrakech, Morocco, during the 12th Maghreb Congress of Neurology. This meeting coincided with the meeting of the Intergovernmental Conference on the Global Compact for Migration, a United Nations meeting held Dec. 10-11, 2018, in Marrakech. The charter of the global alliance was adopted by the U.N. General Assembly on Dec. 19, 2018, and this constitutes real progress for the cause of migrant people.

The topics covered in this meeting included: "Migration and Global Health" (Mustapha El Alaoui Faris, Rabat, Morocco), "Neurology and Migration: What We Know, What We Learn by Neurosciences, What We Can Do" (Antonio Federico, Italy), "Vascular Risk Factors in Migrants" (Serefur Ozturk, Turkey), "Neuroinfections in Migrants" (Erich Schmutzhard, Austria), "Multiple Sclerosis in Migrants" (Riadh Gouider, Tunisia), "Somatization in Migrants" (Maria Benabdeljlil, Morocco), and "Neuro-oncology and Palliative Care in Migrants" (Wolfgang Grisold, Austria). The following is a short summary of the communications.

Most human migration is in search of better opportunities, reflecting the desire for an improved quality of life. The current international migration is a reflection of the world, resulting from the dynamics generated by changes in political, economic, and cultural structures. It reflects the advent of an interdependent world, stimulating new cultural and economic exchanges, and contributing to the social reconfiguration of host and

departure societies. Since the beginning of the 21st century, migration has changed. In the past, people migrated to survive; now they migrate to realize themselves. It is the educated middle classes with high human capital and skills who most migrate. Migration can also have political causes such as civil wars in some parts of the world, including the Middle East or sub-Saharan Africa. In the near future, two particular reasons will have a dramatic role in the migration of people around the world. First, climate change, which could create enormous refugee flows. The second is the world demographic imbalance between the number of people living in low- and middle-income countries and those living in high-income countries that are aging and have low fertility.

Studies on the health of migrants show that migrants have more health problems than the hosting populations. They are more vulnerable to communicable diseases but also to some noncommunicable diseases, such as hypertension, diabetes mellitus, or obesity. The majority of migrants are initially healthier than non-migrant populations, the so-called "healthy immigrant effect."

The health vulnerability of migrants may be due to several factors, such as difficulties in early childhood (e.g., poverty and malnutrition), poor living conditions in the host country, and dangerous work and psychological problems related to the migration process. The prevalence of neurological diseases among migrants remains largely unknown. But, given the high prevalence of neurological diseases in low- and middle-income countries, where the majority of migrants are originating, a high frequency of diseases of the nervous system should be expected among migrants.

However, the incidence, prevalence, and clinical presentation of neurological



diseases may differ in migrant people depending on the epidemiology, geography, and genetic background of the native country. Adult migrants who may have experienced early childhood deprivation are particularly vulnerable to subsequent disorders of the nervous system.

Here are the particularities of some neurological diseases in migrant people. Migrants have more infectious diseases. Tuberculosis, which can cause severe neurological complications, has seen a re-emergence among migrant people living in socioeconomically disadvantaged conditions in host countries. The prevalence of human immunodeficiency virus (HIV) is high in African migrants and may be resistant to HIV drugs, and these patients have more severe cognitive disorders. Some tropical infectious diseases (such as malaria or neurocysticercosis) may occur in host countries either in migrants or in tourists who have been living in areas of high prevalence of these diseases.

Stroke is a major public health problem among migrants given the high prevalence of vascular risk factors such as hypertension, diabetes mellitus, obesity, and smoking. Migrants can have severe strokes at a younger age with high mortality rates and persistent neurological disability for a long time. In some host countries, migrants with cerebrovascular diseases

appear to be less likely to benefit from appropriate treatment such as thrombolysis or thrombectomy.

Studies on the epidemiology of multiple sclerosis (MS) have shown that migration at the beginning of life from a low-risk area to a high-risk area can increase the risk of MS in this migrant population. Likewise, MS in some migrants is much more severe than in the native population (such in North Africans living in France).

Somatization and functional neurological disorders are common among migrant people, and their clinical presentation depends on the native culture of the migrants.

The severity of some neurological diseases that reduce the life expectancy of patients, such as neuro-oncological disorders, raises the problem of palliative care of migrant people. Palliative, hospice, and end-of-life care can be incompatible with culture and religious beliefs of some migrants and requires an appropriate approach.

The WFN Migrant Neurology Applied Research Group plans more meetings dedicated to other neurological diseases in migrant people, such as cognitive disorders in elderly migrants, epilepsy, neurogenetics, migraines and headaches, neuromuscular diseases, movement disorders, anxiety, and depression. •

## INTROPICON

continued from page 1

INTROPICON 2018 also discussed the status of meningitis across the world. The current human T-lymphotropic virus type 1 (HTLV1) status and HIV were presented and discussed. Poliomyelitis and post-polio syndrome are still ongoing problems, which was addressed. Cytomegalovirus infection and Ebola were issues affecting individuals, and their current statuses were presented. Fungal

disease received its share of discussion and time. Snakebites still kill thousands in many countries. Their management remains challenging and, at times, difficult.

In addition, major issues such as stroke, dementia, epilepsy, and Parkinson's disease were discussed. Their unique management and long-term care in resource-poor settings were the main points of discussion. The availability of simple drugs for epilepsy and Parkinson's disease was a major hindrance to neurological care. The

lack of manpower and funding remains a major obstacle to neurological service provision. It is astounding that drugs as cheap as simple anticonvulsants, levodopa, and warfarin, among others, are still not available to billions of individuals living in low- and middle-income countries.

There remains a huge discrepancy in the provision of care in various parts of the tropics. In all, neurological expertise is concentrated in major cities, and in some of those, advanced imaging, genetic testing, and management (including interventional procedures) is available. However, this is by and large in fee-paying settings, which is not accessible to the majority of those who need the service.

Neurology training for young doctors is a priority, and it is heartening to see the increasing numbers of budding training programs across the world. There is nothing like training locally to master the vast number of conditions discussed, but



Amilton Barreira

just as important is exposure to training in more advanced settings. The Tropical and Geographical Neurology Applied Research Group of the WFN is working hard toward these goals. The meeting of this research group is biennial, and the next meeting is planned to be with the African Academy of Neurology in 2021. •

Neurology training for young doctors is a priority, and it is heartening to see the increasing numbers of budding training programs across the world.

FROM THE EDITORS

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

Welcome to the January/February 2019 issue of World Neurology, the official newsletter of the World Federation of Neurology (WFN). This issue begins with the report by Dr. Chandrashekar Meshram, WFN immediate past President, and Dr. Raad Shakir, who report on the second International Tropical and Geographical Neurology Conference (INTROPICON) held in Sao Paolo, Brazil, by the Tropical and Geographical Neurology Applied Research Group (ARG) of the WFN.

Next, Dr. Derya Uluduz reports on the many activities that occurred throughout Turkey during World Stroke Day 2018. In this issue's President's

Column, WFN President William Carroll provides his update and summary of the first 12 months of the new WFN executive administration and an important reminder to all neurologists of the upcoming World Congress of Neurology (WCN) to be held in Dubai Oct. 27-31, 2019.

Dr. Mustapha el Alaoui Faris next provides a summary of the neurology in migrants meeting recently held in Marrakech by the WFN ARG on Migrant Neurology. WFN Secretary General Wolfgang Grisold then reports on the "Advances in Neuroscience and New Strategies for Preventing and Treating Brain Diseases" Conference recently held in Moscow. In this issue's History Column, Peter Koehler informs us about the rich history of Dutch neuroscientists

in Beijing with Rockefeller Foundation support.

This issue also features a number of reports from recipients of WFN Junior Traveling Fellowships to present their work at international conferences, as well as recipients of department visits (observerships cosponsored by national neurological societies and the WFN), highlighting the success of these international educational initiatives and fruitful partnerships.

Finally, this issue features a brief announcement of the very recent passing of Professor Jagjit S. Chopra, the founding President of the Indian Academy of Neurology and previous editor of World Neurology. The upcoming issue of World Neurology will feature more on the life of this



STEVEN L. LEWIS, MD



WALTER STRUHAL, MD

remarkable man.

Finally, this issue features an important announcement and reminder of the Tournament of the Minds at the WCN in Dubai, and the benefits of member societies' teams registering for this very entertaining and educational aspect of the WCN. More information can be found at [www.wcn-neurology.com](http://www.wcn-neurology.com).

JUNIOR TRAVELING FELLOWSHIPS

# World Stroke Congress, Montreal

BY SUBASREE RAMAKRISHNAN

I received a World Federation of Neurology Junior Traveling Fellowship to attend and present the oral presentation "Clinical and Imaging Profile of Takayasu Arteritis Presenting as Young Stroke Syndromes: A Neurological Perspective from South India" at the Top 10 Young Investigators forum at the World Stroke Congress 2018, which was conducted from Oct. 17-20 in Montreal.

I was able to participate and present at the World Stroke Congress and learn, discuss, and interact with other faculty working in the field of strokes. Thanks for the support and encouragement. •



Subasree Ramakrishnan

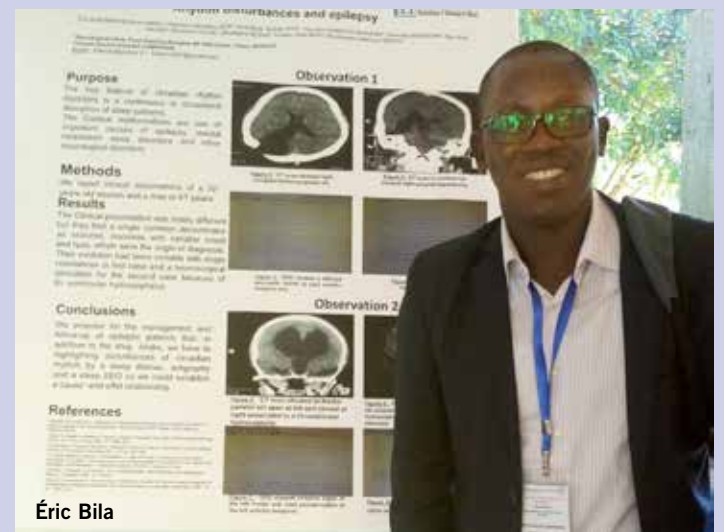
JUNIOR TRAVELING FELLOWSHIPS

# Francophone Society of Chronobiology

BY ÉRIC BILA

I would like to express my deep gratitude to the World Federation of Neurology for granting me a 2018 WFN Junior Traveling Fellowship to participate in the 46th Conference of the Francophone Society of Chronobiology Oct. 22-25, 2018. We had the participation of world experts who presented to us their different works and their experiences. I had the opportunity to present my poster titled "Rhythm Disturbances and Epilepsy in Africa." It was a rich experience in teaching and meeting other researchers of the world about the disorders of biological rhythm and the impact on humans as well as on animals.

At the end of this congress, I understood the close link between biological rhythm disorders and some neurological pathologies, which strengthens my approach in the care and follow-up of patients. •



Éric Bila

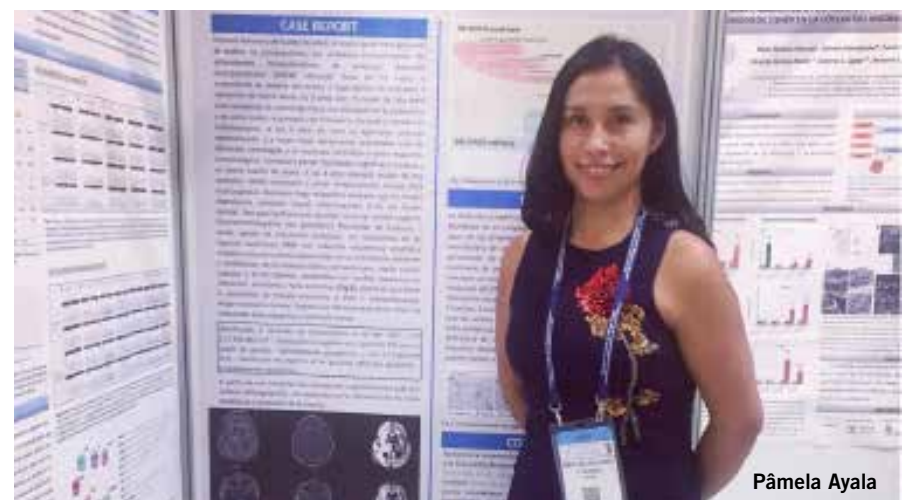
JUNIOR TRAVELING FELLOWSHIPS

# Spanish Society of Epilepsy in Málaga, Spain

BY PÂMELA AYALA

Thanks to the World Federation of Neurology, I had the opportunity to attend the fifth Congress of the Spanish Society of Epilepsy in Málaga, Spain.

Throughout the conference, I exchanged ideas and established contacts with great professionals in the field of epilepsy. During the lectures and discussions, news advancements in epilepsy were presented, and I became familiar with some medications that are not yet available in Latin America.



Pâmela Ayala

I also had the opportunity to present my work as a poster and oral presentation. My work was entitled "ENCEFALOPATÍA EPILÉPTICA SENSIBLE A URIDINA ASOCIADA AL GEN CAD," or Epileptic Encephalopathy

Sensitive to Uridine Associated with CAD Gene."

Epilepsy is one of my passions, and day after day I try to perfect my technical scientific skills. I just have to thank the WFN for promoting my growth. •





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# Advances in Neuroscience

## New Strategies for Preventing and Treating Brain Diseases

BY WOLFGANG GRISOLD

The conference on “Advances in Neuroscience and New Strategies for Preventing and Treating Brain Diseases” took place Nov. 12-13, 2018, in the Buyanov City Clinical Hospital, one of the largest multidisciplinary hospitals in Moscow. It was organized and chaired by Prof. Eugene Gusev and Prof. Alla Guekht in cooperation with the Russian Ministry of Health, the Moscow Healthcare Department, and the World Health Organization European Office for the Prevention and Control of Noncommunicable Diseases, among other institutions.

In addition to the local and international board, the chair of the WHO European Office in Moscow, João Breda, attended the opening. Extensive press coverage and TV presence demonstrated the interest in brain diseases.

The conference was attended by an international faculty, speakers from Russia, and more than 400 doctors from Moscow and 16 cities of the Russian Federation, as well as from Kazakhstan, and Tajikistan. It provided an update on current issues in neurology with the main topics being brain diseases from bench to bedside, cerebrovascular disease, neuropsychiatry, and epilepsy. Also, translational studies and multidisciplinary strategies in brain diseases, autoimmune disorders, and diseases of the peripheral nervous system were highlighted. An innovative feature was the interactive case conferences in neuro-oncology and epilepsy. Based on case presentations, a multidisciplinary session was held demonstrating the importance of interdisciplinary work.

The lectures were a good synthesis of international and local speakers and served the purpose of an update of current neurological concepts, ranging from epidemiology toward new concepts of therapy. In addition to the program, the congress speakers were also able to visit the neurological and neurosurgical departments of the hospital, which demonstrated the high standard of the clinical practice in Moscow. The local faculty also produced a book of the lectures,



Speakers gathered at the Buyanov City Clinical Hospital in Moscow to discuss strategies in preventing and treating brain diseases.

which contains Russian and international contributions, based on the conference topics; this book is registered with an ISBN number.

Following the congress, the speakers were invited to a meeting of the international advisory board in the Research and Clinical Center for Neuropsychiatry of the Moscow Healthcare Department. The center is a modern clinical facility specializing in research and treatment of mental disorders and neurological diseases, including depression, anxiety disorders, suicidal ideation, epilepsy, neuropathic pain, post-stroke rehabilitation, and

cognitive decline. On site, the faculty was able to visit the neuroimaging and neurophysiology laboratories and other research units, appreciating the up-to-date equipment and highly professional staff. It was also a good introduction to the interactive research seminar.

The research groups of the hospital presented their valuable studies, covering a broad range from bench to bedside to several practically applied projects. In addition to cerebrovascular disease and epilepsy, several projects touched on neuropsychiatric issues, which underlines the important issue of brain diseases as a multiprotocol and multidisciplinary task.

Following the presentations, faculty members were asked to continue with small working groups on several topics and projects being carried out. This was a rich source of interaction, and not only advice and input, but also cooperation and joint projects were initiated.

In summary, this interesting and internationally well-attended meeting could fill the gap from high level interaction of neurology with official and global institutions toward interaction and practical work toward joint projects with international cooperation. As such, it is an important template for advocacy in neurology. •



Speakers for the Moscow conference.



## HISTORY

# Dutch Neuroscientists in Beijing with Rockefeller Foundation Support

BY PETER J. KOEHLER

In this column on the history of international relationships in neuroscience (*avant la lettre*), the Rockefeller Foundation should have an important place, as it is associated with the foundation of so many neuroscientific institutions (for instance the Montreal Neurological Institute, 1934, and the Nieuw Leeuwenbergh, later named Brain Center Rudolf Magnus, in Utrecht, Netherlands, 1927) and research fellowships for so many international neuroscience students.

The Rockefeller Foundation was founded in 1913 and its mission has been (and still is) “to promote the well-being of humanity throughout the world.” For this essay, I selected one aspect, notably the Dutch-Chinese relationship, and more in particular the work of neuroanatomist Cornelis Ubbo Ariëns Kappers (1877-1946) and neurologist Ernst de Vries (1883-1976) in Beijing.

## Ariëns Kappers

C.U. Ariëns Kappers worked under anatomist Louis Bolk (1866-1930) and the father of Dutch neurology, Cornelis Winkler (1855-1941) in Amsterdam. By the connections of the latter, he was able to start building an international network by working at the Dutch desk of the Zoological Station at Napoli, Italy (that opened in 1874 following ideas of zoologist Anton Dorhn (1840-1909), its first director), where he met Hungarian neurohistologist Stefan von Apàthy and neurophysiologist Jakob von Uexküll. He also visited the anthropological criminolo-

gist Cesare Lombroso (1835-1909) in Torino, Italy. Following the publication of his PhD thesis, he was invited by the German comparative neuroanatomist Ludwig Edinger (1855-1918) to work at the Senckenbergisches Institut in Frankfurt am Main, Germany. Here he worked on the concept of neurobiotaxis.

In 1909, Ariëns Kappers became director of the new Amsterdam Central Institute for Brain Research that was built following the call of the International Brain Commission to establish such institutes in various countries.<sup>1</sup> Later, he published a three-volume book on comparative neuroanatomy, which was translated into various languages.<sup>2,3</sup> At the Amsterdam Institute, he received approximately 70 colleagues from all over the world to do research. He received doctorates *honoris causa* from several universities (including Yale, Glasgow, and Chicago).

Next to the subject of neurobiotaxis, Ariëns Kappers’ two other research interests were the folding of cerebellar and cerebral cortex and craniometry. For the latter subject, he collected hundreds of skulls during his many voyages abroad.<sup>4</sup> One of these voyages was to Beijing (1923-1924).

## Beijing Union Medical College and the Rockefeller Foundation

The college had been founded in Lockhart Hall, Beijing, in 1906 by several cooperating missionary organizations (a union of three British and three American societies) and was supported by the Empress Dowager. The Beijing Union Medical

College included a men’s (60 beds) hospital, a women’s (30 beds) hospital, and an outpatient department. Following the establishment of the Rockefeller Foundation in 1913 and its China Medical Board to implement a program of medicine in China, Beijing Union Medical College received important financial support. At the time, there were 24 medical schools in China and 244 missionary hospitals with 446 foreign staff physicians.

John D. Rockefeller (1839-1937), a Baptist, already made modest gifts to religious and missionary programs in the 19th century. In fact, it was the first major program of the Rockefeller Foundation. The Beijing Union Medical College was to be organized after the model of Johns Hopkins Medical School and advice was given by William Welch (1850-1934) and Simon Flexner (1863-1946), who already played a role in the Rockefeller Institute for the advancement of medical research that had opened in 1902. They visited Beijing in 1915.

The Preparatory Department, employing several Americans, opened in 1917 and had eight premedical students. Two years later, the first seven medical students entered Beijing Union Medical College. Among the faculty members was William G. Lennox (1884-1960), who later returned to Harvard, where he worked in the field of epilepsy.

In 1919, philosopher-educator John Dewey (1859-1952) noted that “the Rockefeller buildings are lovely samples of what money can do. In the midst of this weak and worn city, they stand out like illuminating monuments of the splendor of the past in proper combination with the modern idea.”

Bertrand Russell (1872-1970), who visited Beijing in 1920, was more critical about the endeavor. “Although the educational work of the Americans in China is on the whole admirable, nothing directed by foreigners can adequately satisfy the needs of the country...” He later wrote that he had been saved by the “serum that killed the *pneumococci*” when he developed pneumonia during his visit to Beijing.

Beijing Union Medical College attracted the best medical students in China and several talented young American physicians taught here. The same is true with respect to visiting professors, including physiologists Walter B. Cannon (1871-1945) and Anton J. Carlson (1875-1956).<sup>5,6</sup>

At first, the neurology department was a part of the department of medicine, but in 1923, it became a separate department, headed by Professor Andrew H. Woods (1872-1956), who had been in China before



C.U. Ariëns Kappers

and lectured neurology at the Pennsylvania Medical School in Philadelphia. He started working at the Beijing Union Medical College hospital in 1920.<sup>7</sup>

## Ariëns Kappers in Beijing

Ariëns Kappers left the Netherlands in August 1923 after being invited by European representative of the Rockefeller Foundation Richard M. Pearce (1874-1930) to give a course of lectures in anatomy at the Beijing Union Medical College. With the intention of teaching brain anatomy, he shipped 50 “well-wrapped up brains” from the Amsterdam Wilhelmina Hospital to China. Moreover, he was expected to teach histology. For this purpose, he used the time sailing from Marseille to Shanghai to refresh his knowledge.

At the time, the Beijing Union Medical College had about 1,000 coworkers, including teachers, assistants, administrators, and servants. Ariëns Kappers’ name there was Kao (from his name) – Tai-Fu (great teacher/professor).<sup>8</sup> In February 1924, he gave his last lecture in Beijing and made a voyage to several parts of China, including Changsha (Hunan), where he gave a series of 13 lectures (three on philosophical subjects).

Upon his return, he visited Manchuria (in particular its capital Shenyang formerly known as Mukden), Korea, Japan (visiting Okayama, Sendai, and Tokyo that had been stricken by an earthquake), collecting the brain of a whale and brains of Japanese for the Amsterdam Institute. He continued his voyage to the United States, where he lectured in several cities. In Chicago, he met his colleague, neuroanatomist Charles Judson Herrick (1868-1960). In New York, he gave a series of eight lectures at Columbia University and



Ariëns Kappers in front of the Beijing Union Medical College.

**HISTORY***continued from page 6*

met John D. Rockefeller Jr. (1874-1960) as well as Simon Flexner, who at the time was working on poliomyelitis.

Ariëns Kappers served as visiting professor 1929-1930 at the American University in Beirut (that opened in 1866 following endeavors by the American missionaries at Lebanon and Syria since 1862). De Vries replaced him as director of the Institute in Amsterdam. Ariëns Kappers gave a series of lectures at the American University in Beirut, using the opportunity to collect craniometric anthropological data from Phoenician, Arab, and Jewish skulls in Syria, Turkey, and Palestine.

Only recently (November 2018) Ariëns Kappers posthumously received the Yad Vashem medal for the application of his anthropological work during the German occupation, saving at least 300 Jews from deportation.<sup>9</sup>

#### De Vries at the neurology department of the Beijing Union Medical College (1925-1932)

Whereas Ariëns Kappers stayed in Beijing only for about half a year, Dutch neurologist Ernst de Vries stayed there for several years (1925-1932). He was born the son of

Dutch botanist Hugo de Vries (1848-1935), who independently rediscovered Gregor Mendel's laws of heredity in the 1890s, introduced the term "mutation," and published his two-volume *Mutation Theory* between 1900-1903. Following his MD, he worked with Constantin von Monakow (1853-1930) in Zurich and from 1910 at the Central Institute of Brain Research in Amsterdam as well as in the Amsterdam Clinic of Winkler. After working as physician in Leiden until 1925, he was called to become neuropsychiatrist at the Beijing Union Medical College, where he became associate professor in 1927. His work and that of his colleagues at the Beijing Union Medical College can be followed in the *BUMC Annual Reports*. As mentioned above, a separate neurology department was established in 1923, headed by Andrew H. Woods. German neuropsychiatrist Maximilian Otto Pfister (1874-?) was associate (professor) and acting head of the department. They had two residents. Apparently, Beijing was not spared from the encephalitis lethargica pandemica.<sup>10</sup> In the 1925 report, for instance, it is written that "We have had an unusually large number of cases of extra-ocular and intra-ocular motor palsies which we concluded were caused by encephalitis epidemica." Furthermore, psychiatric patients were sometimes seen at the asylum that was

**"The lack of accommodation for mental cases was keenly felt, for the treatment with malaria and relapsing fever in a few cases of general paralysis had encouraged further practice along this line."**

Ernst de Vries

run by the local police. The 1925 report mentioned "the lack of accommodation for mental cases was keenly felt, for the treatment with malaria and relapsing fever in a few cases of general paralysis had encouraged further practice along this line." Indeed, at the time, GPI (general paralysis of the insane) patients were treated with malaria to create a number of relapsing fever periods. The discoverer of the treatment, Julius Wagner von Jauregg (1857-1940), received the Nobel Prize in 1927.<sup>11</sup> Other types of neurosyphilis were observed at the outpatient department. "As was the case last year, the number of cases of neurosyphilis was remarkably large, especially the cases of acute basal meningitis with involvement of the VIIth and VIIIth nerves." Third-year medical students received "instruction in clinical neurology and neuropathology.... Ample

opportunity was given to third-year students to practice the technique of lumbar puncture."<sup>12</sup> Apparently, De Vries replaced Pfister as associate under Woods. From the 1927 report we learn that "Dr. de Vries has supervised the laboratory work of the department, and has studied and made reports upon all of the brains, spinal cords, and other nervous tissues removed in autopsies by the Department of Pathology and in the various operating rooms."

To get an impression of the neurological diagnoses that were made, I mention the list from the report of that year: GPI, meningitis, myelitis, neuralgia, tuberculosis, tabes, beriberi ("usually in Chinese coming from the south and live here on a diet"),<sup>13</sup> epilepsy, vascular disease, trauma, neuritis, psychoneurosis, and neurasthenia. An interesting sentence by De

*see HISTORY, page 10*

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## DEPARTMENT VISIT

## Montreal Neurological Institute and Canadian Neurological Society

BY CLAUDIA M. GUÍO-SÁNCHEZ, MD

PHOTO BY JUANA RUBIO

“The problem of neurology is to understand man himself.”

Wilder Penfield.

This quote is the famous inscription I found the first time I entered the Montreal Neurological Institute and Hospital (MNI), better known as “The Neuro”; four weeks later, I understood its meaning in a deeper way.

I am a young neurologist from Colombia who graduated three years ago. Since before my training in neurology, I have always had a genuine interest in patients with demyelinating diseases. Canada is a prevalent country with thousands of multiple sclerosis (MS) cases per year, in contrast to Colombia, which does not have a prevalent number of MS cases. I am currently working on the multiple sclerosis program at the Hospital Universitario Nacional in Bogota, with almost 400 patients to date. That is why I had the desire to see how MS clinics work in countries like Canada, with the firm purpose of improving my knowledge for patients with MS in my country.

When my professor, Dr. Gustavo Patino, told me about the opportunity to come to MNI through the World Federation of Neurology (WFN) and the Canadian Neurological Society department visit program, my first thought was about the possibility to meet and exchange experiences with McGill University and the MNI MS clinic.

I therefore applied to this wonderful

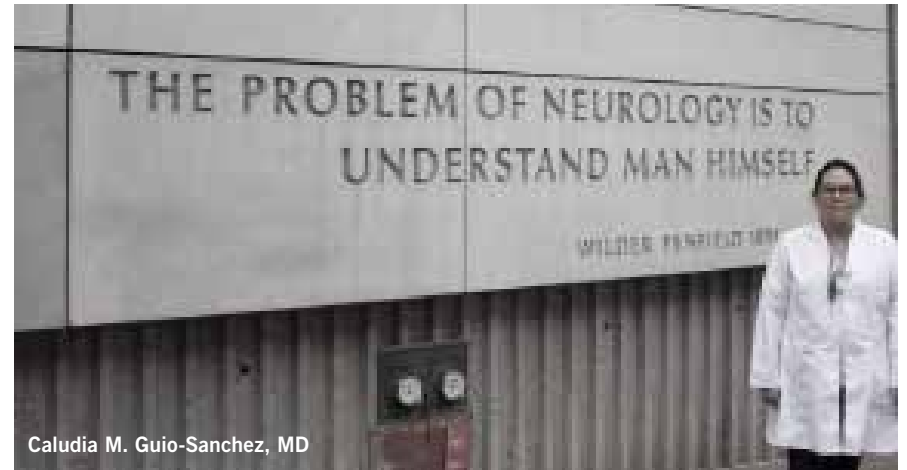
program with a special request to enjoy my visit in the MS clinic, and I had a positive response from Dr. Anne-Louise Lafontaine and Dr. Guy Rouleau, who allowed me to spend the entire month improving my skills in the MS field under the tutoring of Dr. Paul Giacomini.

My activities in the MNI MS clinic were:

- Attending the MS clinic with the different specialists, Dr. Yves Lapierre, Dr. Alexander Saveriano, and Dr. Paul Giacomini, discussing the different cases coming to the clinic every day and covering a wide range of clinical aspects and MS treatment strategies.
- Learning about the Canadian health system and the different guidelines of diagnosis and treatment of MS.
- Meeting and understanding the need to have a multidisciplinary structure in the MS clinic, sharing experiences in the special care of these patients with MS nurses Vanessa Spyropoulos and Kathleen Savoy.
- Attending the grand rounds of the MNI every Wednesday with the opportunity to share experiences with other neurologists and residents of the MNI staff.

My experience in the MNI MS clinic was great and allowed me to improve my academic, clinical, and social skills. Another aspect I learned in my stay at the MNI is the importance of the interaction of health care and research, which are closely integrated and provide mutual benefits. I strongly believe this is a key learning point for a middle-income country like Colombia.

The advantage of having done my visit in Montreal was meeting a lot of interesting people with different cultural



Claudia M. Guio-Sanchez, MD

backgrounds and nationalities, from the patients to the doctors and the rest of the staff; the cultural exchange for me was exceptional.

The MNI is a great place to perceive in a deep way how neurology is a powerful tool to understand the human being in all its dimensions, and the MS clinic taught me about the need to create a multidisciplinary center to support these complex patients in my country and encourage more study collaborations to increase research.

I am grateful for the time I spent with McGill University and the MNI MS clinic team: Dr. Lapierre, Dr. Saveriano, Dr. Giacomini, Vanessa, Kathleen, Maria, and Rose; every member of the team was friendly and open to teach me all the time.

Dr. Paul Giacomini was a great mentor and inspirational figure for me. I want to thank him especially for helping me to confirm my desire of pursuing my career in MS. I understood that despite working in a country with low MS prevalence, I had to keep the firm conviction of

providing a more comprehensive care with better quality to patients with this disease in Colombia.

Furthermore, I was delighted to see how the women were encouraged to develop their careers in fields like demyelinating disorders. I felt that in the MNI the support from their male colleagues was strong and empowering. I think this is another point to keep in mind to improve in my country with its huge gender inequality.

I would also like to thank Carmen, Andy, and Angela, the administration staff of the MNI, for all the arrangements during my visit. Thank you to the WFN and the Canadian Neurological Society for this scholarship; I hope more people from South America will be motivated to apply to this outstanding experience.

Finally, I would like to express my gratitude to my hospitals in Colombia, Hospital Universitario Mayor-Méderi and Universitario Nacional, with special thanks to Dr. Ernesto Ojeda and Simón Cardenas for supporting me during my absence. •

## DEPARTMENT VISIT

## Montreal, Canada

BY NATALIA HERRERA MARÍN



Natalia Herrera Marin

During my first week in Montreal, I was pleased to be at the Brenda Milner Centennial Symposium for cognitive neuroscience. It was amazing to see some of her students and listen to her. She has been teaching the core of mysteries of the brain and the exploration of senses, and every experience that I had there reminded me what she said all the time: “We are what we remember.”

I attended two specialized clinics by the movement disorders department and the epilepsy department. I also met nice doctors like Anne-Louise Lafontaine, Martin Veilleux, Eliane Kobayashi, and others from the movement disorder team, and fellows like Sophie Maltais, Sondos Al-Hindi, and Ali Naemi. I met the epilepsy staff and attended academic meetings with them.



Herrera Marin with colleagues at the Montreal Neurological Institute and Hospital.

The meeting “Parkinson’s Disease: Our Common Fight” was held Sept. 18, 2018. They wanted to teach patients about motor and non-motor symptoms — how to face them, the necessary care, how to come back to the real world to work, sing, dance, etc. I was touched by a patient singing with a pianist; they showed that everything is possible with dreams and perseverance.

With this experience, I had the opportunity to interact with colleagues from different countries and see how they approach patients, no matter the culture,

the religion, the language, or the technology that the country has. I learned that the most important thing is to listen to the patient, step by step. It is just to use the senses and to simplify the medicine that we explain to patients.

I would like to express my gratitude to Montreal Neurological Institute and Hospital for welcoming me with their arms wide open. Every person was important for my learning.

Thanks to the World Federation of Neurology and the Canadian Neurological Society for choosing me and supporting me. •



## DEPARTMENT VISIT

## Ege University, Izmir, Turkey

BY DR. ABIODUN HAMZAT BELLO

I would like to start by thanking the World Federation of Neurology (WFN) and the Turkish Neurological Society (TNS) for selecting me to visit the neurology department at Ege University in Turkey. It is a highly specialized department where advanced neurology care is given to patients.

My experience started with the kind support received from Jade Levy of WFN and Burak Tokdemir of TNS. They were both wonderful in helping me navigate through the initial documentations and travel plans.

On arrival at the neurology

department, I was warmly welcomed by my amiable supervisor, Dr. Nese Celebisoy, who introduced me to other members of staff and took me around the department. On a daily basis, I had the opportunity of going to the outpatient clinics and the neurophysiology and neurosensory labs. I was primarily with her in the neuro-ophthalmology and neuro-otology outpatient clinics and the neuro-ICU. I had eye-opening experiences in the management of patients with optic neuropathy, ocular myasthenia gravis, and patients with vertigo, just to mention a few. We had daily morning rounds in the 12-bed neuro-ICU, where I had the opportunity to see ischemic stroke patients who

had thrombolysis and thrombectomy, which are currently unavailable in my home. However, I saw patients being fed by pre-packaged, nutritionally-balanced liquid feeds via nasogastric tubes, and I find this to be locally adaptable.

In addition, I rotated through the neurophysiology lab, where I observed electroencephalography, electromyography, and nerve conduction studies. I was able to acquire new experiences that I can put to practice locally in my center.

I also participated in the movement disorder clinic, where I experienced firsthand patients on levodopa infusion gel and deep brain stimulation for Parkinson's disease. Dr. Ahmet Acarer was very helpful in explaining the procedures and also demonstrated botulinum injection techniques to me.

A major part of the program was the 54<sup>th</sup> National Neurology Congress of TNS, which took place Nov. 30 to Dec. 6, 2018, in Antalya. During that period, I met with and listened to top erudite scholars from TNS as they delivered their research work and lectures. I was particularly fascinated by the highly advanced neurology practice and research in Turkey.

I have to say that the department visit was very helpful to me as I was able to learn and experience neurology subspecialty practice at the highest level, and I found some of the areas practicable for me here in my center in Nigeria. Since my return, I have started putting measures in



place to improve patient care in the area of neuro-ophthalmology and movement disorders.

Before I conclude, I once again thank WFN and TNS for the golden opportunity, and I look forward to others in the future. Let me also appreciate Jade Levy, Burak Tokdemir, Prof. Dr. Nese Celebisoy, Dr. Ahmet Acarer, Dr. Ayse Guler, Prof. Dr. Figen Gokcay, Dr. Kamran Samadli, and all other members of the neurology department who are too numerous to mention. •



## DEPARTMENT VISIT

## Hacettepe University Hospitals, Ankara, Turkey

BY DR. TEMITOPE HANNAH FAROMBI

As a beneficiary of the joint initiative of the World Federation of Neurology (WFN) and the Turkish Neurological Society fellowship, I was hopeful and expectant of the many opportunities this fellowship would offer. I was open to learning new skills as well as to improving on previously learned ones.

Ankara is a calm and serene city in Turkey with a mixture of old and modern outlooks. The people are warm, kind, and hospitable with smiles on their faces. Hacettepe University Hospitals sit at the center of the city with state-of-the-art neurological facilities. My mentor, Prof. Topcuoglu, introduced me to different units of neurology in the hospital. I had my first observership for 10 days at the neurophysiology lab under the supervision of Dr. Temucin and Dr. Gockem. Here I witnessed for

the first time the clinical application of nerve conduction study, needle electromyography, and visual evoked potential protocols in the management of neurological disorders. Of note is a diagnosis of Guillain-Barré syndrome that was hitherto diagnosed as Bell's palsy by the ENT surgeon.

During the second week, I attended the 54<sup>th</sup> annual Congress of the Turkish Neurological Society Nov. 30-Dec. 6, 2018, in Antalya. The conference provided opportunities to network with other neurologists in Turkey, and I was exposed to different cutting-edge research and new frontiers in neurological practice. I was fascinated by the deep and rich culture of practice in Turkey and the willingness to collaborate with other neurological societies in the region. This experience was most gratifying as it provided avenues for learning in a fun-filled environment.

**“My experience has made me realize the knowledge and technology gap we face as neurologists from sub-Saharan Africa.”**

During my last week, I observed acute stroke care in the intervention radiology unit and neurointensive care unit, where thrombolysis and thrombectomy were carried out on stroke patients. I also had a series of teaching sessions on nonepileptic psychogenic seizures and video electro-encephalography protocol with Prof. Serap.

Overall, my experience has made me realize the knowledge and technology gap we face as neurologists

from sub-Saharan Africa and has stirred up the determination to know more by constantly improving myself through skill acquisition training and also increasing the advocacy for improved neuro care in our community.

I am really thankful for this great opportunity offered by the WFN, the Turkish Neurological Society, and the neurology department of Hacettepe University Hospitals. •

## DEPARTMENT VISIT

## Johannes Gutenberg University of Mainz Neurology Department

BY SALAHEDDINE MOURABIT

Thanks to the support of the World Federation of Neurology (WFN) Education Committee and the German Society of Neurology, I was able to benefit from this program of visit during which I spent a month at the neurology department of Johannes Gutenberg University of Mainz. During this period, I was able to get an idea about the function of a neurology service in Germany, to see new techniques, and to participate in different activities of the service (patient visits,

admissions staff roles, and multidisciplinary staff roles).

With Dr. Dresel, I attended specialized consultations for abnormal movement, Parkinson's disease, and multiple sclerosis (MS, which is still a rare and under-diagnosed pathology in Senegal). I also participated in a workshop on the use of botulinum toxin in the treatment of spasticity under the supervision of Prof. Gruppa and Dr. Dresel.

My visit to the neurophysiology department was informative, and I had the opportunity to work on devices of the last generation and to note a relative

difference between the German and the French methodology that's practiced here in Senegal.

The week I spent at the stroke unit was fruitful, because I was able to attend thrombolysis, the basis of stroke management in acute phase, which is common in Germany and not done in Senegal because of lack of funding. Thanks to Prof. Gruppa, I was fortunate to see for the first time in my life the practiced operation to implant a neurostimulator for deep brain stimulation, to understand the procedure, and also to see the device used for the calibration and regulation of stimulations.

In summary, I will say that my visit at the neurology department of Johannes Gutenberg University was rewarding, and I am satisfied with this experience that allowed me to see new techniques that I could put into practice here in Dakar.

Dear committee, I am thankful to you for giving me this great opportunity, and I would like to thank the German Society of Neurology, the entire team of the neurology department of Johannes Gutenberg University, and especially Dr. Dresel, whose help and guidance were invaluable to me. •

## HISTORY

continued from page 7

Vries in a Dutch publication on the Beijing Union Medical College is the following: "Patients are admitted only as long as they are of interest for educational or scientific purposes. Foreigners as well as a part of the Chinese population of Peking are aware of this, and many of them prefer to go to the German or French hospital, instead of being used as study material at the Beijing Union Medical College." However, they added that if much laboratory work for diagnosis is necessary the Medical College is much better equipped

patients. Looking at the statistics of the 1930 report, it is remarkable that the highest number of admitted patients had psychiatric diagnoses, including hysteria, neurasthenia, and "neurosis of the stomach." At the outpatient clinic, diagnoses made most often included idiopathic epilepsy, hysteria, neurasthenia, neuritis of the facial nerve, and tabes dorsalis. During De Vries' absence on leave, he was replaced by Georg Schaltenbrand (1897-1979), who performed unethical experiments during the Nazi period.<sup>15</sup> Upon his return in 1931 he was assisted by Yu Lin Wei, who became associate professor of neurology and psychiatry. Neurosurgery was done by S.T. Kwan, who "has spent the past two years at the clinic of Dr. Charles H. Frazier in Philadelphia. This is the first time the department has had a trained surgeon with full time to devote to this particular subject, and it is confidently expected that under Dr. Kwan's direction there will be developed the first major neuro-surgical clinic in China." Having worked with Frazier (1870-1936), it is of no surprise that he treated trigeminal neuralgia, but he also treated other afflictions of the nervous system. "In the past six months, there has already been a very satisfactory increase in the number of cases of trigeminal neuralgia, brain tumor ... Peripheral nerve injuries, the result of gunshot wounds or other war injuries, are always abundant and will continue to be so until a less chaotic political condition prevails throughout the land."<sup>16</sup>

During his stay at the Beijing Union Medical College, he published clinical cases (including a paper on post-vaccinal encephalitis in the *China Medical Journal* in 1928) but was mainly interested in circulation disorders of the brain (publishing in the *Arch Neurol Psychiatry* in 1931).<sup>17</sup>

In 1932, De Vries settled in Soerabaja (in the present Indonesia), where he practiced neurology until he was taken prisoner by the Japanese during World War II in 1943. Upon his return to the Netherlands in 1949, he worked as neuropathologist in Utrecht.

## Rockefeller Foundation support in neuroscience projects

The Rockefeller Foundation interest in neurology increased in the 1930s when psychiatry "embracing neurology and psychology" became an important field of interest. Departments of psychiatry, but also of neurology and neurosurgery (including the Montreal Neurologic Institute mentioned above), were supported financially. Furthermore, "the Foundation maintained a steady stream of fellowships for advanced training in psychiatry, neurology, neurosurgery and related subjects... This type of support was by no means confined to the United States and Canada. The foundation aided significant research activities in Great Britain, France, Holland, Belgium, Germany, Sweden, Norway, and Switzerland."<sup>18</sup> p.130-1 This included the National Hospital for Diseases of the Nervous System at Queen Square (London), Otfried Foerster's Institute of Neurological Research in Breslau (1934), the Rudolf Magnus' Physiological Institute in Utrecht (mentioned above, 1927). The stream of refugee neuroscientists from Germany was helped by the Rockefeller Foundation only in a limited degree between 1933 and 1940, but this improved after 1940.<sup>19</sup> •

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E. de Vries

resulting in choosing it by many. During the time of his appointment, there were 73 physicians, 33 professors or associates.<sup>13</sup>

When Woods left Beijing in 1928, the neurology department became a part of the Department of Medicine again. It consisted of four services, including General Medicine (51 beds), Pediatrics (16 beds), Dermatology and Syphilis (5 beds), and Neurology and Psychiatry (9 beds).<sup>14</sup> De Vries became associate professor taking care of the neurological and psychiatric





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