



# *news* **NEUROVIRTUAL**



## **An interview with Carlo Noble, RPSGT/Sleep Lab Coordinator at NeuroTrials Research**

**Atlanta's Leading Early-Late Phase Clinical**

**Research Site**

**Page 6**

Neurovirtual continually strives to contribute to the medical training of specialists and technicians with its first EEG and video-EEG course in the Dominican Republic - **Page 3**

Positive Results at SLEEP 2019 reinforce the high standard of Neurovirtual solutions - **Page 4**







## World Authorities in Neurophysiology Come Together at Congress in São Paulo

An important event in the Brazilian medical calendar, the XXVII Brazilian Congress of Clinical Neurophysiology and the VIII Latin American Congress of Clinical Neurophysiology took place from August 14 to 17 in São Paulo, bringing together hundreds of experts and researchers from around the world.

The aim of the event was to share knowledge, present and discuss the latest news in the areas of electroencephalography, electroneuromyography, evoked potentials, polysomnography, intraoperative monitoring, neuromodulation and neuromuscular ultrasound. All of these themes were brought together through a high level of technical presentations in the form of lectures, roundtables, and practical workshops.

During an intense four days, simultaneous programming took place in four conference rooms, addressing the main themes related to neurophysiology, with titles including "Continuous EEG monitoring in critically ill patients: fundamentals and practice," "Polysomnography: updates and new criteria," "Challenges in electroencephalography," "Clinical studies on non-convulsive status epilepticus: the role of EEG," "Epilepsy surgery," "Childhood epilepsy," "Polysomnography: REM sleep behavioral disorder," "Polysomnography: sleep in the neonatal period," and others.

Among the speakers, there were several Neurovirtual clients, including Dr. Elza Márcia Targas Yacubian, PhD in Neurology, Associate Professor at the Department of Neurology and Dr. Geraldo Nunes Vieira Rizzo, Neurologist and



Neurophysiologist and Director of the Institute of Clinical Neurophysiology and Sleep Laboratory of Hospital Moinhos de Vento and Specialist in Neurology, Clinical Neurophysiology and Sleep Medicine by AMB. Dr. Targas gave the presentation "The EEG in the diagnosis and treatment of epilepsies," and Dr. Geraldo Rizzo chaired a roundtable on polysomnography and neuromodulation and presented a lecture entitled "Transcranial Magnetic Stimulation: Potential Use in Sleep Disorders."

Neurovirtual was present at the congress, represented by business consultant Alex Ribeiro, having the opportunity to present to the audience the equipment BWIII EEG and BWIII EEG PLUS ICU, reinforcing its leadership in the sector. Another initiative was a promotional action, which consisted of the drawing of the winning coupon worth \$5,000 towards the purchase of any new equipment.

## Innovation in neurosurgery requires science and humanism

This was the theme embraced by the XXV Mexican and International Congress of Neurological Surgery for the 2019 edition, science and humanism as the bases of innovation in neurosurgery, essential factors to keep the profession always at the forefront and for the scientific generation of new techniques and procedures.

Organized by the Mexican Society of Neurological Surgery, the Congress took place from July 8 to 12 in Nuevo Vallarta, Mexico. Experts from different nations attended the event as well as doctors, residents, and students, which presented many different interesting panels throughout the days. There was also the participation of exhibiting companies, such as Neurovirtual, represented by its collaborators, Erika Almazán and Joseph Pardo, who presented two solutions from its portfolio aiming at the Neurosurgery sector: BWIII EEG and BWMini EEG.

The company shares the vision of the congress, by developing technologies that help the humanization of diagnosis worldwide.

The feedback



from congress participants was very positive. Dr. Guillermo Sepulveda González, Specialist in Neurosurgery, summed it up: "The congress was very satisfying and featured a diverse program focused on neurosurgery, approaching from epilepsy and epilepsy surgery, to Parkinson's problems and surgery, as well as head trauma."

# EEG and Video EEG Course

May 24<sup>th</sup> and 25<sup>th</sup> | Santo Domingo, Dominican Republic



## Neurovirtual continually strives to contribute to the medical training of specialists and technicians with its first EEG and video-EEG course in the Dominican Republic



Committed to supporting and promoting medical education in the neurological field worldwide, Unique Representaciones and Neurovirtual jointly organized the Electroencephalography and Video-EEG course, addressed to specialized physicians and technicians in the field.

With the attendance of 70 technicians and 50 specialists, the course was held in the Instituto Tecnológico de Santo Domingo. The course welcomed professionals from every region who highlighted the importance of attending this useful event, which offered an enriching academic program in electroencephalography. The course was also divided into two sections: On Friday, May 24<sup>th</sup>, the course was addressed to EEG technicians, and on Saturday, May 25<sup>th</sup>, its focus was on specialized physicians.

Some of the topics the attendants of the course deemed most valuable were: types of artifacts and how important it is to know them, brain death protocol, 10-20 and 10-10 electrode location techniques, video-EEG, regular EEG, wakefulness and sleep, and patient EEG in the ICU.

The device BWIII Plus EEG ICU Monitoring was the equipment used for demonstration during the course. This is a very complete device for ICU EEG and LTM, which allows users to perform

*"I am surprised to see all the people who enrolled in this course, and I would like to publically congratulate all of you for making the decision to be here today. I am glad to see so many people willing to strengthen their EEG knowledge, and I think you've made the greatest of decisions coming here," concluded Dr. Ayleen Hernández, neurophysiologist, who led the introduction to the course addressed to technicians.*

*"Technicians are crucial for achieving accurate EEG recording" – Dr. Luis Tusen, neurologist.*

medical revision online from any reading station, mobile devices included.

The course also was attended by physicians from the Dominican Republic, renowned in the neurological field, such as Dr. Evelyn Lora (neurologist and pediatrician), Dr. Ayleen Hernández (neurophysiologist), Dr. Carlos Muñoz (neurologist and epileptologist), Dr. Luis Tusen (neurologist), and Dr. Luis Cantizano (neurologist). Carlos Díaz, manager of Unique offered these words of thanks: *"We want to express our gratitude to all those people from every region of the country who showed their interest in participating in this event, and how well received the event was. We, Unique Representaciones, exclusive distributor of the Neurovirtual brand in our country, hope to continue contributing to this important health field in the Dominican Republic through our foundation, Unique."*

Neurovirtual thanks attendants for participating and its strategic partner for the support, and is committed to the contribution in the medical training of specialists and technicians worldwide.







## Positive Results at SLEEP 2019 reinforce the high standard of Neurovirtual solutions

Considered the world's leading sleep medicine forum, the Associated Professional Sleep Societies (APSS) meeting, SLEEP 2019, held from June 8<sup>th</sup> to 12<sup>th</sup> in San Antonio, Texas, was a huge success. Approximately 5,000 specialists from all over the world participated in this 33rd edition of the event, which had an agenda featuring 1,000 presentations and the participation of 115 exhibiting companies, including Neurovirtual.

One of the highlights of the event was the keynote address, by Amita Sehgal, PhD, who addressed the theme "Using Small Animal Models to Determine How and Why We Sleep." The other lectures throughout the event proved to be inspiring and highly informative, mixing clinical and basic science.

The Neurovirtual team was present in their booth at the event, where it presented its portfolio of solutions for the sleep medicine industry, and took the opportunity to launch the BWMini HST Compass worldwide, a compact, versatile and powerful device that offers superior advantages compared to other suppliers in the market. The audience was very receptive and positive, and this was revealed by the great business result of the confirmation of an order from a major hospital. There was also a high influx of visitors at the booth, with renowned physicians such as Dr. Bahaaddin Al-Shawwa, Fellowship Director of Children's Mercy Hospital in Kansas, and the report of qualified leads captured for future sales. Our CEO Ed Faria, Account Manager Sergio Solis, and Clinical Director Felipe Lerida represented Neurovirtual at the event.



Since its inception, SLEEP has brought together more than 100,000 professionals from different parts of the world, such as Australia, Brazil, Hungary, Israel, Nigeria, Thailand and others, and over the last 33 years has been proud to contribute to the advancement of sleep medicine. The next edition of the event is already scheduled for June 13th to 17th, 2020 in Philadelphia.



## International Symposium on Sleep Medicine discusses effective and opportune treatment

### II International Symposium of sleep medicine



The II International Symposium on Sleep Medicine, promoted between July 4th and 6th by the Chilean institution Clínica Universidad de los Andes, gathered over 300 professionals, including national and international specialists and teachers, and a complete program full of highly relevant subjects and world-class names in the sector.

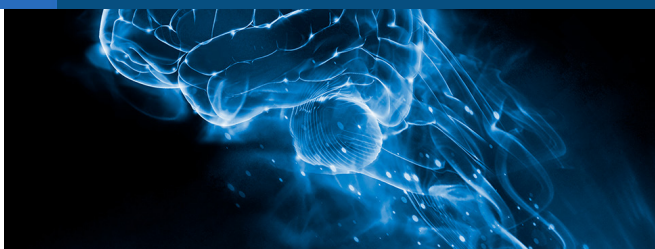
The scientific program was very intense, with the participation of 26 renowned speakers, including Dr. Daniel Perez Chada, Dr. Marianna Evans, and Dr. Eduardo Castrillon. The event addressed the various problems related to sleep medicine, including neurology, bronchopulmonary medicine, otolaryngology, and dentistry, bringing together doctors and dentists, and their respective acting bias.

The different pathologies associated with apnea were also part of the agenda, such as bruxism, endothelial damage and genetic malformations, being recommended for the use of tests such as polygraphy and polysomnography as diagnostic elements. Neurovirtual had a booth and were participants exhibiting their polysomnography equipment, specially highlighting the BWIII PSG



Plus and the BWMini PSG/HST models, reinforcing the company's leadership in quality and technology focused on sleep medicine, in an event that has already become a national and international reference.

Dr. Evelyn Benavides, a neurologist and one of the symposium's directors, underlined the high rate of adherence to the event. "We are very excited and hope to continue doing this next year as it is a highly valued event for all of us who are specialists in sleep medicine", she said.



Pursuing the goal of democratizing neurology-related topics for physicians, residents, students and health professionals, the El Salvador Association of Neurological Sciences organized the VII International Congress of Neurology for Non-Neurologists and the VI International Symposium on Neurology. From May 23<sup>th</sup> to the 25<sup>th</sup>, the city of San Salvador hosted important debates and presentations of solutions for the area.

Some of the topics addressed were: epilepsy in the transition from adolescent to adulthood; migraines and the risk of neurovascular events; how to detect early stroke: hemorrhage versus ischemia; pediatric stroke: a hidden reality; strategy for prevention and cognitive vascular treatment; advances related to Alzheimer's and Parkinson's; febrile seizures; syncope and lipothymia; challenges of headache diagnoses in adults;



management of vertigo by non- neurological physicians; and advances in neuroimaging in neurological diseases.

## International Congress in El Salvador Addresses Neurology for Non-Neurologists

Neurovirtual was provided a booth at this event and was represented by Andrea Parra, Sales Manager Latin America and Joseph Pardo, Engineer. Together they presented the company's portfolio of solutions aiming at the neurological sector, with special highlights on the BWIII EEG Plus, equipment which

allows physicians to have remote access to the exam through specific software.

Numerous experts, including Dr. Francisco Cornejo Salvador and Dr. Wendy Sanchez Salvador, stopped by the booth and had the opportunity to learn more about what Neurovirtual has to offer.



## Neurovirtual's solutions stand out at "Sleep Diploma" event in Peru



Innovate, educate, and learn. These were the main objectives of the "Sleep Diploma" event held in Lima, Peru, attended by over 50 sleep medicine professionals from different countries of the continent.

During the event, experts and residents could reinforce their knowledge through theoretical and practical activities, workshops, and conferences. Four of the 11 days of the program were dedicated to the trade show, with Neurovirtual's participation highlighted, demonstrating the practical functionality and operation of the BWMini PSG/HST equipment (suitable for laboratory and home care). Participants were keenly interested in these hands-on sessions, resulting in valuable learning.

Neurovirtual, represented by Latin American Sales Manager Andrea Parra, also presented other diagnostic tools that are part of their polysomnography portfolio, the BWIII PSG and BWIII PSG PLUS, as well as accessories and supplies, reinforcing its leadership in quality, innovation and state-of-the-art technology to better serve patients.

The company's booth was very busy during the show, being



visited by renowned doctors such as Dr. Felix Parales and Dr. Edison Valencia, both from Colombia, and Dr. Carlos Zuñiga from Chile. Several experts expressed interest in learning more about the company and receiving estimates after the event, and one of them even resulted in a deal with a Colombian specialist.





## An interview with Carlo Noble, RPSGT/Sleep Lab Coordinator at NeuroTrials Research Atlanta's Leading Early-Late Phase Clinical Research Site

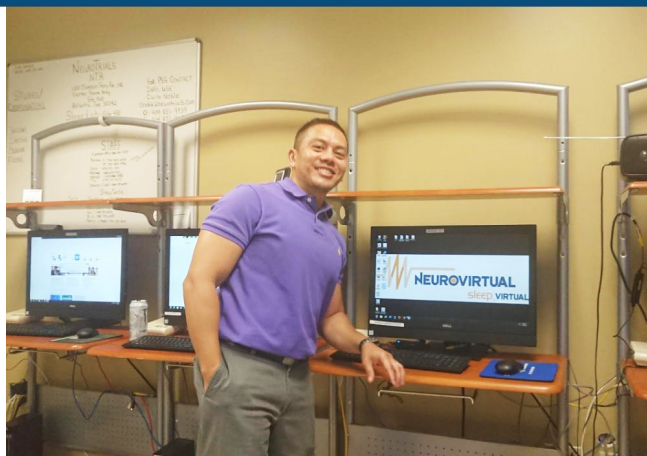
**N**euroTrials Research is a clinical research company founded by Dr. Russell Rosenberg in 1997. For the past two decades, NeuroTrials has been providing research services for leading medical device companies, pharmaceutical companies, and hospitals such as Johns Hopkins Hospital, a teaching hospital and biomedical research facility, among others. With nearly two decades of experience in sleep medicine research, Mr. Carlo Noble, RPSGT and Sleep Lab Coordinator for NeuroTrials Research, understands the value of great relationships. By fostering strong relationships with his own team, and with Neurovirtual as a partner, NeuroTrials Research is one of the preeminent research facilities in the country. Much of the staff at NeuroTrials has been with the company for 15+ years, and there is a mutual respect amongst the team that creates a cohesive working environment. Accountability, transparency, and the willingness to accept constructive criticism allows the team at NeuroTrials to continue to deliver a high-quality product to their research sponsors.



By partnering with Neurovirtual, Carlo and his team can build an equally strong relationship with their PSG vendor as they do with their research sponsors. The ability of the Neurovirtual PSG software to adapt to the requirements of their research sponsors allows for stronger results, benefiting all parties, particularly the public, with new and better devices and proven treatments.

Dr. Rosenberg brought Neurovirtual to Carlo's attention, and Carlo felt very impressed by the unique features of the Neurovirtual platform, including unlimited software upgrades and updates for the life of their equipment, and most importantly solid technical support. Carlo mentions in the interview that customer service is the single most important aspect of operating equipment (to him). Carlo gives examples in the interview where the Neurovirtual system has been able to save him and his team lots of time and made it easier for them to deliver their work without delay. Carlo credits this to having a high level of support and an intuitive user interface.

### Interview with Carlo Noble, RSGT:



#### **Neurovirtual: Carlo, can you tell us a little about NeuroTrials and what you do here?**

*"We deal with pharmaceutical companies, performing research trials on medications, as well as on medical and health devices."*

**Carlo:** NeuroTrials does clinical research, and has been around for over 20 years, with Dr. Russell Rosenberg as the founder. We deal with pharma companies doing research trials on devices, medications, sometimes just sleep parameters like questionnaires, Actiwatches ... Anything that's been on the market, we've probably had a hand [in vetting]. We also deal with clinical CPAP therapy. We've worked with different hospitals and organizations like Johns Hopkins, European companies, Japanese companies, going back 17 years with my experience since I've been working with NeuroTrials.

#### **Neurovirtual: Can you give us a brief history of NeuroTrials, your personal experience, and tell us about your clinical investigators (the doctors):**

*"Dr. Russell Rosenberg, Dr. Michael Lacey, and Dr. Matthews Gwynn are the primary clinical investigators here."*

**Carlo:** Dr. Rosenberg is a Ph.D. in psychology, Dr. Lacey is our sleep specialist and neurologist, and Dr. Gwynn is a neurologist. Dr. Rosenberg is the face of NeuroTrials and the company as a whole; he is the founder. Dr. Lacey and Dr. Gwynn are stakeholders and partners. There are other physicians involved but not named. We've existed in this facility since 2008, and I have been with the company in this role since 2002. Most of the personnel here have been here for 15+ years, including office personnel and study coordinators, and I'm the longest tenured sleep tech and manage the facility. Dr. Rosenberg also owns the Atlanta School of Sleep Medicine and Technology.

The fundamentals of medication and device trials often go through NeuroTrials before they are approved by the FDA. We've been involved in many medications and devices that I prefer not to name.

**Neurovirtual: What sets NeuroTrials apart from other research facilities – for instance, here in the Atlanta area?**

**“In one word: personnel.”**

**Carlo:** Dr. Rosenberg is very well known worldwide. He and Dr. Lacey, they’ve been expert witnesses to some trials, Dr. Rosenberg has given many talks and many interviews on local and national news and conferences, even overseas. It’s our personnel, the organization, the checks and balances we have in the sleep lab and our offices. It’s a team effort. I like to stay away from the word “family,” because it is a very professional environment, but there is a lot of respect. The team takes criticism very well, we deal with audits, and everything is very transparent with the sponsors of our studies, and I believe that is what differentiates NeuroTrials. There have been many research labs when I started in 2002 [that ] no longer exist, but NeuroTrials is still going strong.

**Neurovirtual: On your website, it mentions several studies that you are working with. In your opinion, which is the one you find most interesting?**

**“Narcolepsy... I have seen the benefits of treatment in the quality of the subjects’ lives.”**

**Carlo:** Narcolepsy in general, because I’ve known people who have been diagnosed, and when I have run a study with previous narcolepsy subjects, there is a specific fear that they share with me because they don’t know when paralysis can occur, and when they can fall asleep. They feel handicapped with everyday activities (without treatment). I’ve had subjects clinging to the wall to prevent the possibility of falling, etc. It is still not very well known, and when you see someone who takes naps in a car, you may attribute it to just being tired or because it is early morning, but following a sleep study, they turned out to be narcoleptic. It can be a struggle. Without medication, these subjects would not be able to lead normal lives, and I have seen the benefits of treatment in the quality of the subjects’ lives.

**Neurovirtual: What prompted you and your team to seek out new PSG equipment with Neurovirtual?**

**“Dr. Rosenberg met one of the Neurovirtual sales rep, and he brought it to my attention...”**

**Carlo:** We had a lot of troubleshooting that started to become necessary with our current system, and it almost became a daily and nightly problem. The old equipment we had was over 10 years old, and we had it even before moving to our current facility in 2008, and the sleep techs weren’t happy, and I knew they weren’t. It made our jobs harder, the fact that we had to troubleshoot (often). There was a lot of electrical interference, and the capabilities we needed for research trials we were conducting required that we upgrade our sleep systems. It just came time where we needed to eliminate the extra hardship on the sleep techs, so I started asking them which platforms they had worked with in the past, and it was actually Dr. Rosenberg who met one of the Neurovirtual sales representative, and he brought it to my attention. It definitely caught my interest because I wasn’t familiar with Neurovirtual and their solid offering[s].

**Neurovirtual: How many Neurovirtual systems do you have at NeuroTrials?**

**“Ten systems.”**

**Neurovirtual: What type of issues did you encounter with the old equipment and software?**

**“It was archaic and often had to be calibrated and reset for every study, which was very time consuming.”**

**Neurovirtual: How did the NV product address some of the issues for you? Which key things did Neurovirtual help you with?**

**“Customer service. That’s the one thing I’ve always been a big proponent of.”**

**Carlo:** Can you help us with what we need? A lot of it was the montages or the mapping, depending on the sponsor’s needs on the PSG. That’s been a great plus compared to other platforms that the techs have dealt with before; they say that Neurovirtual has been the easiest to work with. With Neurovirtual, we know that we are not losing any data, because everything exists on the recording, which a lot of systems don’t do. Once you start recording (on another system), you cannot make any changes, whereas Neurovirtual gives you the option to make adjustments, such as channels or belts, without having to pause or change the recording, and with Neurovirtual, we never have to worry about that. It is very user-friendly.

**Neurovirtual: How does Neurovirtual compare to other brands you have worked with in the past from the perspective of costs?**

**“[C]ompetitors have much higher costs of ownership.”**

**Carlo:** Being present at many conferences, I deal with a lot of vendors, and I found out that competitors have much higher costs of ownership. They charge for software licenses separate from the device, and upgrades are also charged, whereas with Neurovirtual they are complimentary, which is a huge cost savings.

**Neurovirtual: How has the flexibility of the Neurovirtual software platform benefited NeuroTrials?**

**“Some sponsors’ requests are very specific, and we haven’t come to a point where we couldn’t do it with the Neurovirtual system”**

**Carlo:** The equipment and software we have from Neurovirtual has been very easy to use for myself and my staff. Some of our sponsors ask for specific mapping of channels, specific reports, and if we couldn’t find it, it was always easy for us to call Neurovirtual technical support and have it taken care of, often [the] same day . A lot of it deals with what can we use with the system we have now, like PAP integration. We didn’t have to pay for any upgrades; we were able to call technical support and get it implemented at no cost due to the support policy Neurovirtual has in place. The software is very user-friendly. Neurovirtual customizes to our needs. Some sponsors’ requests are very specific, and we haven’t come to a point where we couldn’t perform their requests with the Neurovirtual system.

**Neurovirtual: Would you recommend NV to others in your field?**

**“Yes, I would recommend it to anybody in the sleep field.”**

**Carlo:** Yes, whether it is research or clinical diagnostics. The user-friendliness, 24/7 tech support, customization, and even the [hardware] design is very intuitive. We have radiology and cancer centers on either side of our office, and from a technical standpoint the worst thing you can have is electrical interference with your studies, and we’ve never had that with our Neurovirtual systems.



Neurovirtual participates on average in 20 to 30 congresses and conferences in different countries around the globe. Taking our goal to humanize the diagnostic, we pride ourselves in being part of this community and to be able to give our contribution to clinicians and patients.

Below you will find the list of events for 2019, where Neurovirtual will be presenting its solutions to make neurology and sleep diagnostics more human! We hope to see you there!

## USA

### SLEEP 2019

San Antonio, TX, USA

June 8 - 12, 2019

### American Association of Sleep Technologists (AASST)

St. Louis, MO, USA

September 6 - 8, 2019

### American Epilepsy Society - Annual Meeting

Baltimore, MD, USA

December 6 - 10, 2019

## BRAZIL

### Congresso Brasileiro do sono

Foz do Iguaçu - PR

December 4 - 7, 2019

## COLOMBIA

### Curso Internacional de Trastornos del sueño en Pediatría

Armenia, Quindío

August 2 - 3, 2019

### Simposio Latinoamericano en Actualizaciones De Medicina De Sueño

Bogota, Colombia

October 11 - 12, 2019

## MEXICO

### X Encuentro Nacional de Medicina del Dormir

Mexico City, Mexico

August 14 - 17, 2019

## ARGENTINA

### IX Curso Taller Internacional de Trastornos Respiratorios durante el Sueño y VMNI

Buenos Aires Academia Nacional de Medicina

September 19 - 20, 2019

### Congreso LACE 2019 Liga Argentina contra la epilepsia

Buenos Aires, Argentina

September 19 - 20, 2019

### Congreso de la Sociedad Argentina de Neurología Infantil

Santa Fe Province, Argentina

October 17 - 19, 2019

### 56° Congreso Argentino de Neurología

Mar del Plata, Buenos Aires, Argentina

November 19 - 22, 2019

## CHILE

### II Simposio Internacional de Medicina del Sueño

Las Condes, Chile

July 4 - 6, 2019

### VII Congreso Chileno Sochimessi

Santa Cruz, Chile

October 24 - 26, 2019

### LXXIV Congreso de la Sociedad Chilena de Neurología

Puerto Varas, Chile

November 14 - 16, 2019

## LATAM

### VII Congreso Internacional de Neurología, VI Simposio internacional de Neurología

San Salvador, El Salvador

October 7 - 10, 2019

### XXVIII Congreso Internacional de Neurología y Neurocirugía

Punta Cana International Convention Center

October 3 - 6, 2019

### XIX Congreso De La Sen y XVIII Jornadas De La LECE

Ecuador

October 7 - 10, 2019

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