NeuroPace Shares Positive Data from Studies of the RNS System at the American Academy of Neurology 2019 Annual Meeting

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Results Demonstrate Significant Seizure Reduction in Adults with Drug-Resistant Epilepsy; Insights into the Human Brain

MOUNTAIN VIEW, Calif. — May 9, 2019– NeuroPace, Inc., a Silicon Valley-based medical technology company, presented long-term clinical results demonstrating that the RNS® System for refractory epilepsy significantly reduces seizure frequency in patients, with 1 in 3 people achieving 90% or greater reduction in seizure frequency at nine years. Data from new research illustrating potential for the RNS System to identify objective biomarkers in the brain were also presented. Both developments were shared at the American Academy of Neurology (AAN) 2019 Annual Meeting in Philadelphia last week.

The company's groundbreaking Long-Term Treatment Study of the RNS System is the largest and longest prospective neuromodulation study in the field of epilepsy, with 256 patients across 33 epilepsy centers prospectively analyzed for nine years. The study showed that treatment with the RNS System resulted in significant seizure reduction and improved quality of life for patients, including improved memory and cognition.[1] Median seizure reduction across all patients in the study (who had drug-resistant epilepsy and a median of 10 seizures per month) was 75% at nine years. Results of the study were previously shared at the American Epilepsy Society Annual Meeting in December 2018.

"These nine-year results demonstrate compelling long-term seizure reduction in patients treated with the RNS System," said Dileep Nair, M.D., a paid consultant to NeuroPace, principal investigator of the study and section head of adult epilepsy at the Neurological Institute at Cleveland Clinic. "Through the body of information provided by RNS System, we are gaining a better understanding of the human brain – both generally, and on an individual level. It is exciting to consider how this knowledge might be used to improve the treatment of brain disorders."

An additional presentation on new research evaluating the RNS System's ability to detect mesiotemporal lobe epilepsy (MTL) patients' treatment response was given by Sharanya Arcot Desai, Ph.D., senior research scientist at NeuroPace. The retrospective analysis used machine and deep learning algorithms to demonstrate that ECoG data can reliably differentiate responders from non-responders, signaling the technology's potential to uncover additional biomarkers in the brain.

"Electrographic data captured by the RNS System is the single largest collection of ambulatory brain recordings in the world," said NeuroPace Chief Medical Officer Martha Morrell. "It will undoubtedly expand our understanding of the human brain and epilepsy. With the use of advanced analytical techniques, the RNS System provides a window into the location, frequency, and triggers of an individual's seizures. These insights have the potential to lead to the treatment of other brain disorders that affect millions of people worldwide."

As the only FDA-approved medical device that uses brain-computer interface technology for epilepsy, the RNS System offers an advanced treatment option for patients with refractory focal seizures. Neural data from the RNS System provides information that helps clinicians better understand an individual's seizures, allowing them to personalize care and empower patients to better manage their condition. Using artificial intelligence and machine learning, NeuroPace scientists are analyzing millions of electrocorticographic recordings to develop algorithms to help optimize and individualize patient care.

About Epilepsy
One in 26 Americans will develop epilepsy in their lifetime, with approximately 150,000 new cases of epilepsy diagnosed annually. An estimated 3.4 million Americans currently live with epilepsy. Epilepsy is a chronic disorder, the hallmark of which is recurrent, unprovoked seizures. More people live with epilepsy than autism spectrum disorder, Parkinson's disease, multiple sclerosis and cerebral palsy – combined. [2]

About the RNS® System
The RNS System is the world's first and only closed-loop brain-responsive neurostimulation system designed to prevent epileptic seizures at their source. The RNS System is composed of a neurostimulator, leads that are placed at the seizure foci, a remote monitor used by patients to upload their data, and a RNS Tablet and Patient Data Management System (PDMS) used by physicians. Physicians can view their patient's electrographic data on a secure website and program the device to personalize therapy for each individual. Unlike anti-epileptic drugs or resective surgery, brain-responsive neuromodulation outcomes typically improve with time and do not cause the cognitive side effects that can be associated with those alternatives. The RNS System is now available at nearly all comprehensive epilepsy centers in the United States and is widely covered by private and government insurance.

The RNS® System is an adjunctive therapy for adults with refractory, focal onset seizures with no more than 2 epileptogenic foci. See important safety information at https://neuropace.com/safety/

About NeuroPace
NeuroPace is the global leader in the emerging field of brain-computer interface technologies, which is projected to become a $1.2 billion market by 2024. We are dedicated to developing groundbreaking technology and advancing brain science to improve the quality of life for millions of individuals who suffer from neurological disorders. The company's first product, the RNS System, is the only FDA-approved brain-responsive neurostimulator for the treatment of focal onset refractory epilepsy. In addition to treating epilepsy, brain-responsive neuromodulation holds the promise of treating other brain disorders that impact quality of life for millions of patients throughout the world.

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[1] Loring DW et al., Epilepsia, 2015.

[2]Epilepsy Foundation. “Facts about Seizures and Epilepsy.”
http://www.epilepsy.com/learn/epilepsy-101/facts-about-seizures-and-epilepsy