Stimulating vagus nerve prevents blood loss following surgery, battlefield injuries

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Stimulating the vagus nerve is a potentially efficacious and safe way to stop the flow of blood and prevent hemorrhagic complications following surgery and other invasive procedures, according to a researcher in the Center for Bioelectronic Medicine at The Feinstein Institute for Medical Research.

Jared Huston, MD, FACS, investigator at the Feinstein Institute, will discuss his data during a presentation this Saturday, Dec. 12, 2015, at the North American Neuromodulation Society (NANS) 19th Annual Meeting. The Center for Bioelectronic Medicine, which is recruiting for a variety of positions, will also participate in the NANS' job fair on Friday, Dec. 11, 2015.

Uncontrollable blood loss is a leading cause of traumatic death both in civilian hospitals and on the battlefield. After conducting extensive research, Dr. Huston and his Feinstein Institute colleagues developed the Neural Tourniquet, a device that uses electronic nerve stimulation to slow blood loss. The Feinstein Institute recently announced its partnership with Battelle, a leading non-profit scientific research and development lab, to bring the Neural Tourniquet to market.

The Neural Tourniquet represents the latest advancement in bioelectronic medicine, a rapidly developing field that combines molecular medicine, neurophysiology and biomedical engineering to discover and develop nerve-stimulating and sensing technologies to regulate biological processes. Bioelectronic medicine begins the same

way drugs are developed: with the identification of a target for a disease. But then, instead of screening chemicals, bioelectronic medicine experts screen for nerves that control the target, and then design devices that control those nerves. Since every organ in the body is under the control of a nerve, it is likely that many diseases can be treated with electronics instead of drugs. Bioelectronic medicine devices have the potential to deliver treatment specifically where it is required versus a drug which typically is distributed throughout the body and causes side effects. The list of possible diseases, conditions and injuries that bioelectronic medicine could treat includes cancer, hypertension, diabetes, Alzheimer's disease, rheumatoid arthritis, organ transplantation, paralysis and shock.

"We are growing the Feinstein Institute Center for Bioelectronic Medicine and want talent to join us in our mission to translate discoveries into cures and treatments for countless patients," said Chad Bouton, managing director of the Center for Bioelectronic Medicine. "There is perhaps no better place than NANS to find the talent that will allow us to help to continue to build the future of medicine."

"In our job fair, we want to showcase open positions in areas of science and medicine that are cutting edge," said Ashwini Sharan, MD, president elect of the NANS. "The Feinstein Institute is a research institution that breathes innovation, so I am delighted that job opportunities in their Center for Bioelectronic Medicine are being highlighted at the fair."

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