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# Bioelectronic medicine to treat lupus

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**This pilot study will test the effect of an innovative, proprietary device, which emits electrical pulses through the patient's ear five minutes a day for four days.**



**Singapore -** Researchers at Northwell Health's Feinstein Institute for Medical Research are conducting a clinical trial to evaluate the efficacy of bioelectronic medicine to treat pain associated with lupus, a chronic and potentially fatal autoimmune disease affecting upwards of 5 million people around the world. This pilot study will test the effect of an innovative, proprietary device, which emits electrical pulses through the patient's ear five minutes a day for four days.

Based on previous work conducted at the Feinstein Institute involving modulating neural pathways, bioelectronic medicine therapies have been shown to successfully treat rheumatoid arthritis and holds promise in multiple other areas, including paralysis and diabetes. The emerging field of bioelectronic medicine uses technology to help the body treat disease and injury without the use of pharmaceuticals or experiencing significant side effects. In the case of lupus, researchers hope to treat patients by stimulating the inflammatory reflex, a circuit of nerves that maintains and regulates the body's immune response. Feinstein Institute researchers and physicians anticipate this treatment will inhibit the body's production of the molecule responsible for the inflammation associated with lupus. The unique role of the inflammatory reflex was discovered by Feinstein Institute president and CEO Kevin J. Tracey, MD.

"Lupus is a painful disease, notoriously hard to diagnose and difficult to treat – new treatment options are desperately needed," said Cynthia Aranow, MD, the study's lead investigator. "This trial will study an innovative approach to controlling symptoms of a disease that affects millions. We hope to have encouraging findings very soon."

Approximately 1.5 million Americans and 5 million people worldwide suffer from lupus. More than 90 percent of the individuals afflicted by the disease are women, and the condition is most prevalent among women of color. Patients with lupus experience a host of symptoms, from extreme fatigue to painful or swollen joints and skin rashes. Lupus can also affect internal organs, including the kidneys and brain.

This clinical trial is supported by the John & Marcia Goldman Foundation.