

Bioelectronics and Medicine-Advanced Technology

Alok Kumar*

Biosciences Division, Oak Ridge National Laboratory, USA

Letter

Bioelectronics is employed to assist improve the lives of individuals with disabilities and diseases. For instance, the glucose monitor is a portable device that permits diabetic patients to regulate and measure their blood sugar levels. Electrical stimulation utilized to treat patients with epilepsy, persistent pain, Parkinson's, deafness, essential tremor and blindness. A variation of OEIP, the first bioelectronic implant device that was utilized in a living, free animal for therapeutic reasons. It transmitted electric currents into GABA, an acid. A scarcity of GABA in the body is a factor in chronic pain. GABA would then be scattered appropriately to the damaged nerves, acting as a painkiller. Vagus Stimulation (VNS) is employed to activate the Cholinergic Anti-inflammatory Pathway (CAP) within the vagus nerve, ending in reduced inflammation in patients with diseases like arthritis. Since patients with depression and epilepsy are more at risk of having a closed CAP, VNS can aid them as well. At a comparative time, not all the systems that have electronics utilized to assist improving the lives of individuals are necessarily bioelectronic gadgets, but as it were those which include an intimate and directly interface of electronics and biological systems. Bioelectronic medicine is that the union of molecular medicine, neuroscience, engineering, and computing to create a device to analyse and treat illnesses. The mechanisms of Bioelectronic

medicine for neural control of a biological handle that underlie illness and thus the improvement of devices to modulate these specific neural circuits as therapy utilizing electrons instead of drugs. Bioelectronic medicine has risen at a convergent epicentre in health care, innovation, and science. Bioelectronic medicine may be a better approach to treat disease. Today patients are treated by either drug, which may cause a side effect or drive up costs, which can mask pain signals but they usually can't mask the central cause of disease. With the quick rise in innovation for the precision detection & modulation of electrical signaling patterns inside the nervous system could be a new class of treatment alluded to as bioelectronic medicines. Particularly, the peripheral nervous system will be at the centre of this advance, as the functions it controls in chronic infection are extensive. The vision for bioelectronic medicine is one among the tiny, implantable devices that can be joined to person peripheral nerves. With the quick rise in advancement for the accuracy detection & modulation of electrical signaling patterns inside the nervous system can be a new class of treatment implied to as bioelectronic medicines. Particularly, the peripheral nervous system will be at the center of this progress, as the functions it controls in chronic infection are extensive. Drugs aren't inherently designed to adapt to individual treatment, so both under- and overdosing are common, leading to therapy failure or unwanted side effects. Progresses in bioelectronic medicine hold guarantee to address some of these challenges and provide personalized treatment of disease.

***Address for Correspondence:** Alok Kumar, Biosciences Division, Oak Ridge National Laboratory, USA, E-mail: alokku@gmail.com

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