The Advantages of Neuromodulation

Medical technology developer Jeffrey Greiner serves as the CEO of Valencia Technologies Corporation, a medical research and manufacturing firm that develops disruptive technologies in the field of [neuromodulation](http://en.wikipedia.org/wiki/Neuromodulation). As the former CEO of Advanced Bionics, Greiner has been actively involved in developing, manufacturing, and selling neuromodulation devices, including advanced cochlear implants, for many years. Jeff Greiner started Advanced Bionics with seven scientists and engineers; over the course of 18 years, he led the company to a position as a leader in its field with more than 2,000 employees and revenue of $300 million.

Neuromodulation encompasses a range of medical treatments that modify neural activity by stimulating nerves in the brain and nervous system using electrical impulses. In one important application, neuromodulation technologies and treatments are now used to treat intractable pain and have a number of significant advantages that other pain treatments do not have.

1. Neuromodulation relieves pain without the side effects of traditional drugs. Because it works by delivering electrical impulses rather than chemicals, patients can avoid side effects such as exhaustion, excessive sedation, and confusion induced by drugs.

2. Neuromodulation is typically administered in a minimally invasive manner. As a result, patients can easily “test drive” the treatment to see how well it suits them before making a decision. The trial process does not involve major surgery and is generally completely incision-less.

3. Because of its minimally invasive nature, neuromodulation can typically be reversed entirely. If patients wish to stop the treatment, the implant or device that delivers the electrical impulses can simply be removed.

4. Finally, neuromodulation is a U.S. Food and Drug Administration-approved technique that has been used medically for several decades and has been found to be effective in alleviating pain. It has tremendously improved many patients' quality of life.