A Nerve Stimulation Device and Method to Lower Blood Pressure
ID# 2006-3159

Blood Pressure Diagnostic

Technology Summary
At least 10% of patients with hypertension suffer from resistant hypertension, which is pharmacologically intractable. In such cases, an alternative treatment is activation of the blood pressure lowering baroreflexes via electrical stimulation of the baroreceptor afferent nerves. The disclosed invention is a novel electrical stimulation method to produce a baroreflex response with greatly reduced power consumption and no damage to the nerve. The stimulation method either can be incorporated into existing baroreflex stimulation devices, or may be the basis of a new device.

Application & Market Utility
Current baroreflex stimulation technologies are not clinically practical. Existing devices use continuous stimulation and require costly periodic surgical replacement. It is unclear whether the continuous baroreceptor stimulation pattern these devices employ is ideal for reducing blood pressure and minimizing nerve damage. The new method is safer and more comfortable than present methods. A device using the new method possibly could function without need of an implanted power source, which would reduce the overall cost and complexity of the therapy.

Next Steps
Animal studies have proven successful; seeking opportunities for clinical trials. Seeking continuous funding support and licensing partners.

TECHNOLOGY READINESS LEVEL

Seeking
Investment | Licensing | Research

Keywords
- Cardiovascular
- Electrophysiology
- Hypertension
- Baroreflex
- Stimulation

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