

Nucleus Pulposus Replacement for Spinal Disc Therapy

Description:

An estimated 640,000 individuals are hospitalized annually for Intervertebral Disc (IVD) associated maladies accounting for \$7.6 billion in direct costs in the U.S. Current treatment options for the IVD include non-surgical management, which is only effective in about 2/3 of patients, and invasive surgical interventions including replacement of the disc with a metallic/polymeric artificial disc or permanent immobilization of the disc using metal hardware. These last resort surgical procedures treat the symptoms without solving the problem and have major adverse effects. Therefore, a large gap in treatment options exists. To bridge this gap, an alternative strategy is emerging which aims to treat or replace the central region of the IVD, called the nucleus pulposus (NP). IVD degeneration appears to initiate in this NP region thus early-stage interventional therapies targeting this degenerative process are being sought. One such technology is termed “nucleus pulposus replacement (NPR).”



This technology is a nucleus pulposus replacement comprised of a novel tissue-derived biocompatible porous balloon-like structure with the purpose of containing and anchoring synthetic and/or tissue engineered materials in the center of the IVD. The “balloon” can be introduced and filled using minimally invasive means. Once in place, it will serve as a structural replacement of the NP, prevent further IVD degeneration, and protect cells or tissues implanted to regenerate the spinal disc from the inside. The ultimate goal is to provide for normal and pain-free disc function.

Applications

- Spinal disc therapy
- Nucleus Pulposus Replacement

Benefits

- Large growing market with a real need for more effective solutions
- Compatible with minimally invasive back surgery procedures
- Targets the problem itself and aims to bring a degenerating IVD back to normal, pain free function

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Licensing Status	Available for licensing
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