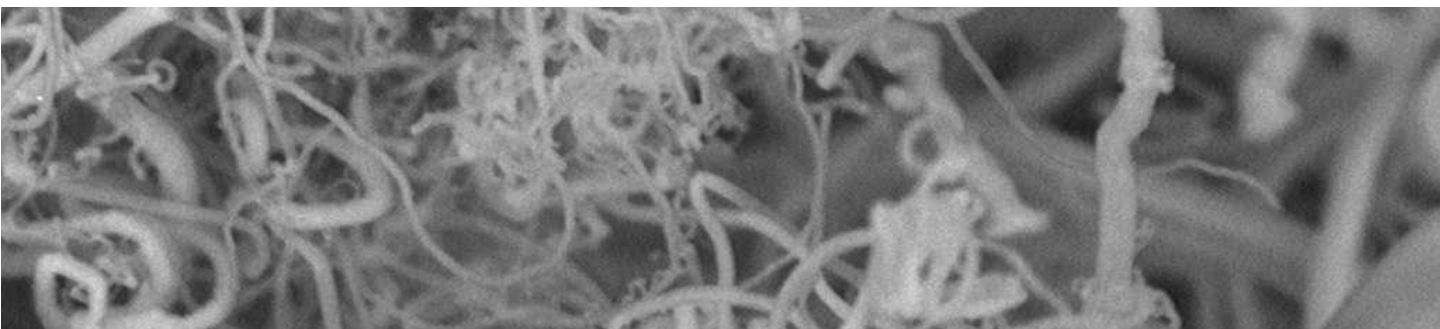




INTELLIGENT NANOFIBER MEMBRANES

Intelligent nanofibers as prosthetic material for the reconstruction of abdominal hernias.



BACKGROUND

The global hernia repair market is almost \$2 Billion USD, of which USA covers just over half, where it is also estimated that 1 million hernia surgeries are performed every year.

There are two treatment options for patients with hernias: non-surgical (option for patients with uncomplicated hernias), and surgical, where surgical meshes are used. In a surgery a synthetic or biological mesh can be used to treat the hernia, however, many complications can occur after, such as infections, encapsulation, recurrence of hernia, among others. A need of options that can avoid these problems is evident.

TECHNOLOGY

Intelligent membranes based on nanofibers. The main purpose of the material is to be used as prosthetic material in hernia reconstruction, mimicking chemical, physical, mechanical and biological properties of the host tissue.

KEY BENEFITS

- Comparison vs commercial meshes:
 - More cellular proliferation (50% vs. 30%)
 - More antibacterial ratio (17 mm vs. 0 mm.)
 - Less mesh weight: 20 g/m² vs. 100 g/m².

DEVELOPMENT STATUS

- Prototype developed.
- Animal trials to be conducted.
- Many other developments using various materials are being tested for medical and non-medical uses.

Technology Readiness Level: 3/9

INTELLECTUAL PROPERTY

In process.

This technology is available for licensing. More opportunities on our website: <http://redottec.com>



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