

## Exogenesis *nanoMesh*<sup>TM</sup>: World's 1<sup>st</sup> Nanotextured Surgical Mesh Product

### Market

2.3M hernia repairs in the US annually – one of the most common surgeries. \$1B U.S. market for hernia repair devices.

9% growth supported by aging population and obesity epidemic.

Market is dominated by synthetic polypropylene meshes, coated and uncoated.

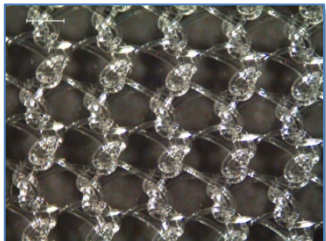
All synthetic meshes lack biocompatibility, resulting in complications, revisions, and cost escalation.

Top players by U.S. market share:

- C.R. Bard (Becton Dickinson) – 27%
- LifeCell (Allergan) – 26%
- Ethicon (J&J) – 19%
- Covidien (Medtronic) – 17%

### Exogenesis *nanoMesh*<sup>TM</sup>

Knit synthetic mesh manufactured from medical grade polypropylene (PP).



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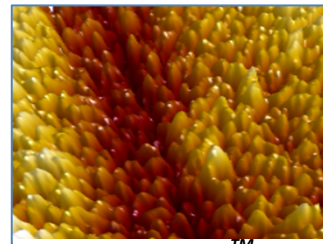
*nanoMesh*<sup>TM</sup> surface modification using Exogenesis proprietary Accelerated Neutral Atom Beam (ANAB) technology results in 30% increase in

surface area and creation of 20-50 nm surface nanotexture. Nanotexture at this scale has been shown to positively impact tissue integration.

### Accelerated Neutral Atom Beam (ANAB) Technology

Surface nanotexture is created by accelerated stream of neutral argon gas, physically rearranging the surface, without chemical changes to polypropylene material.

No additions to the surface, not a coating, no porosity or mechanical weakness created.



*nanoMesh*<sup>TM</sup>

(magnification 75,000x):  
20-50 nm surface nanotexture

### Impact of ANAB

ANAB surface treatment has been shown to enhance biocompatibility of implantable materials in multiple ways:

- (1) Improved soft tissue integration
- (2) Reduced inflammatory response
- (3) Decreased fibrosis (scar tissue formation)
- (4) Reduced bacterial attachment and biofilm formation.

### Status/Value Proposition

- ✓ First Nanotexture surgical mesh with enhanced biocompatibility – currently under 510(k) FDA review
- ✓ Elegant and low-complexity technical solution that does not rely on new materials or coatings
- ✓ Production technology ready for high-volume manufacturing with a single in-line surface treatment step
- ✓ ANAB technology is scalable to multitude of other medical devices
- ✓ ANAB already FDA-cleared on another device (K173864, cleared July, 2018)

### Exogenesis Corporation

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