Biodesign is a platform technology behind numerous tissue-repair products that span multiple medical specialties.

Biodesign is natural extracellular matrix (ECM) derived from porcine small intestinal submucosa (SIS).

The ECM is a complex latticework of proteins and structural molecules that helps guide the growth of cells.¹

Cook’s proprietary processing methodology decellularizes the SIS material while preserving natural matrix molecules such as collagen, proteoglycans, and glycosaminoglycans.²

The result is a scaffold that, when implanted, provides a location for host cells to infiltrate and remodel into vascularized tissue.³
There are three essential components to healing: a scaffold, signals, and cells.

Biodesign’s open lattice structure provides a scaffold for tissue ingrowth.³

The body's signaling mechanisms help patient cells infiltrate the scaffold and completely remodel into natural host tissue.

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**How does Biodesign work?**

**SCAFFOLD**

**SIGNALS**

**CELLS**

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Porcine small intestine, submucosa in blue.

Extracellular matrix structure of lyophilized porcine small intestinal submucosa.
Microscopic view of the remodeling process

Biodesign graft prior to implantation

8 months after implantation

The Biodesign graft (left) allows for the substantial growth of organized tissue, as seen in this biopsy sample, taken eight months after implantation (right). The above images are of the Biodesign Plastic Surgery Matrix implanted in breast tissue.⁴
What is the result?

The result is a durable repair consisting of vascularized tissue.

Placement of a Biodesign graft  15 days post-op
Images of endoscopic tympanoplasty provided by Dott. Giuseppe Panetti, December 2014, Ascalesi Hospital-ASL Napoli.
A proven technology.

With more than 1,400 total published articles, Biodesign is one of the most well-studied graft technologies on the market.*

- **1438** Published articles*
- **529** Describing use in humans*
- **7** > 5 year follow-up*
- **27** Published OHNS studies*
- **22** Randomized, controlled trials*

*As of 1 May 2018.
Data and resources


Published history of therapeutic uses

The technology behind Biodesign has been used in numerous applications throughout the body.

- Dural substitute
- Tympanoplasty
- Periodontal graft
- Cied pouches
- Staple line reinforcement
- Management of second-degree burns
- Enterocutaneous fistula
- Inguinal hernia
- Rectovaginal fistula
- Anal fistula
- Venous ulcers
- Diabetic ulcers
- Eyelid reconstruction
- Sinonasal repair
- Facial reconstruction
- Carotid patch
- Pericardial repair
- Hiatal hernia
- Peripheral nerve repair
- Parastomal reinforcement
- Ventral hernia
- Rectal prolapse
- Peyronie's repair
- Pressure ulcers
Products for

SOFT TISSUE REPAIR

References


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