

# Biohybrid elastomeric scaffolds

Published date: Aug. 28, 2016

## Technology description

### Background

There is a need for biodegradable materials that combine the favorable bioreactive and biocompatible properties of naturally-occurring scaffold materials with the reproducible and predictable properties of synthetic scaffold materials. There is also a need for biocompatible and biodegradable materials that are useful for promoting wound and tissue healing that, that possess bioactive components, and that exhibit elastomeric mechanical properties similar to native tissue.

### Technology

Provided are compositions and medical devices, and in particular, biodegradable elastomeric scaffolds comprising both a synthetic component and a biological component. Also provided are methods of using the hybrid elastomeric scaffolds for treating wounds and/or promoting tissue regeneration. In one non-limiting use, these biodegradable elastomeric scaffolds can promote tissue regeneration and/or wound healing when applied to open wounds that result from surgery or trauma.

## Application area

1. Scaffold for tissue engineering applications especially involving soft tissue
2. Material to protect a wound site and encourage a healing response for military applications

## Advantages

1. Biodegradable elastomeric scaffold with both biological and mechanical properties appropriate for many load bearing sites of tissue regeneration

## Institution

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