



TECHNOLOGY

Bioreactor System for use in Bone and Cartilage Tissue Engineering

OVERVIEW

Researchers at the University of Maryland have developed a novel bioreactor system for bone and cartilage tissue engineering. The system depends on a unique growth chamber configuration that allows for inexpensive, easily manipulated, sterile engineering of bone and cartilage tissue. The growth chamber uses a simple yet elegant design that avoids the high leak and contamination risk of more complicated bone and cartilage perfusion bioreactor systems, making the system more versatile and less expensive than existing designs. Tissue growth is optimized using advanced nutrient exchange and mechanical cues as in perfusion bioreactors, but with the new configuration making implementation far easier than in these available systems.

The design also allows for up to sixteen growth chamber channels to operate simultaneously, making it ideal for laboratory testing purposes.

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Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Patent(s) pending

LICENSE STATUS

Contact OTC for licensing information

CATEGORIES

- Bioengineering

EXTERNAL RESOURCES

- [US Patent 9,260,686](#)

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