# Article information:

Piezoelectric hybrid scaffolds mineralized with calcium carbonate for tissue engineering: Analysis of local enzyme and small-molecule drug delivery, cell response and antibacterial performance - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0928493121000473>

# Article summary:

1. Piezoelectric polyhydroxybutyrate (PHB) fibrous scaffolds were coated with biocompatible calcium carbonate (CaCO3) microparticles to create a multifunctional bioactive platform for tissue engineering.

2. The CaCO3-coated PHB scaffolds had reduced tensile strength and elongation, but similar elastic modulus compared to the pristine ones.

3. The CaCO3-mineralized PHB scaffolds showed improved osteoblasts adhesion/proliferation and antibacterial effect when loaded with enzyme alkaline phosphatase (ALP) and glycopeptide antibiotic vancomycin (VCM).

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article “Piezoelectric hybrid scaffolds mineralized with calcium carbonate for tissue engineering: Analysis of local enzyme and small-molecule drug delivery, cell response and antibacterial performance” is a well-written piece that provides an in-depth analysis of the potential use of piezoelectric polyhydroxybutyrate (PHB) fibrous scaffolds coated with biocompatible calcium carbonate (CaCO3) microparticles for tissue engineering applications. The article is based on research conducted by the authors, which is clearly outlined in the introduction section. The authors provide evidence to support their claims throughout the article, including data from experiments conducted on the materials used in their study. Furthermore, they discuss potential risks associated with using these materials, such as toxicity to pre-osteoblastic cells, which could be a concern when using them for bone tissue engineering applications.

The article does not appear to have any major biases or one-sided reporting; it presents both sides of the argument equally and provides evidence to support its claims. Additionally, all relevant points are considered in the discussion section, including possible risks associated with using these materials for bone tissue engineering applications. There are no unsupported claims or missing points of consideration in this article; all relevant information is provided and discussed thoroughly.

In conclusion, this article appears to be trustworthy and reliable due to its thoroughness and lack of bias or one-sided reporting. It provides evidence to support its claims and discusses potential risks associated with using these materials for bone tissue engineering applications.

# Topics for further research:

* Piezoelectric polyhydroxybutyrate
* Calcium carbonate microparticles
* Tissue engineering applications
* Pre-osteoblastic cells
* Bone tissue engineering
* Antibacterial performance

# Report location:

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