# Article information:

3D bioprinting of cell-laden nano-attapulgite/gelatin methacrylate composite hydrogel scaffolds for bone tissue repair - ScienceDirect
<https://www.sciencedirect.com/science/article/pii/S1005030222006119?via%3Dihub>

# Article summary:

1. Bone tissue engineering (BTE) is a promising strategy for bone repair and regeneration.

2. 3D printing technology has been used to create complex and high-precision scaffolds that support cellular adhesion and promote cellular infiltration.

3. Nano-attapulgite (nano-ATP)/GelMA composite hydrogels loaded with mouse bone mesenchymal stem cells (BMSCs) and mouse umbilical vein endothelial cells (MUVECs) have been used to improve the mechanical strength of the scaffolds, resulting in adequate mechanical properties for bone regeneration.

# 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 “3D bioprinting of cell-laden nano-attapulgite/gelatin methacrylate composite hydrogel scaffolds for bone tissue repair” is an informative piece of research that provides a comprehensive overview of the potential applications of 3D bioprinting in bone tissue engineering. The article is well written and provides detailed information on the use of nano-ATP/GelMA composite hydrogels as bioinks for 3D bioprinting, as well as their potential benefits in terms of printability, mechanical strength, and cell viability. The article also presents evidence from a cranial defect model to demonstrate the efficacy of these scaffolds in promoting bone regeneration and angiogenesis.

In terms of trustworthiness and reliability, the article appears to be unbiased and presents both sides equally. It does not contain any promotional content or partiality towards any particular point of view or product. Furthermore, it does not omit any possible risks associated with using these materials for bone tissue engineering, such as immune rejection or disease transmission due to allogeneic transplantation. Additionally, there are no unsupported claims or missing points of consideration in the article; all claims are supported by evidence from experiments conducted by the authors or other researchers cited in the article.

The only potential issue with this article is that it does not explore any counterarguments or alternative approaches to 3D bioprinting for bone tissue engineering; however, this is understandable given that this was not the focus of the study. All in all, this article appears to be reliable and trustworthy overall.

# Topics for further research:

* Alternative approaches to 3D bioprinting for bone tissue engineering
* Potential risks of allogeneic transplantation
* Immune rejection of 3D bioprinted scaffolds
* Disease transmission from 3D bioprinted scaffolds
* Angiogenesis in bone tissue engineering
* Clinical applications of 3D bioprinting for bone tissue repair

# Report location:

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