# Article information:

3D porous scaffolds from wheat glutenin for cultured meat applications - ScienceDirect
<https://www.sciencedirect.com/science/article/pii/S0142961222001831?via%3Dihub>

# Article summary:

1. Wheat glutenin was used to develop 3D porous scaffolds for cultured meat applications.

2. The pore sizes ranged from 50 to 250 μm, with compressive modulus ranges from 0.5 to 1.9 kPa, depending on the percentage of glutenin used in the process.

3. The glutenin scaffolds supported the proliferation and differentiation of C2C12 mouse skeletal muscle cells and bovine satellite cells without the need for additional coatings or proteins.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

This article is a reliable source of information regarding the use of wheat glutenin as a material for 3D porous scaffolds for cultured meat applications. The authors provide detailed information about the production process, including the physical cross-linking method based on water annealing used to fabricate porous glutenin sponges and fibrous aligned scaffolds, as well as the pore sizes and compressive modulus ranges achieved with different percentages of glutenin used in the process. Furthermore, they demonstrate that these scaffolds are able to support cell proliferation and differentiation without requiring additional coatings or proteins, making them a promising system for cultivated meat applications.

The article does not present any potential biases or one-sided reporting, nor does it contain any unsupported claims or missing points of consideration. All claims made are backed up by evidence provided in the article, such as data from experiments conducted using wheat glutenin scaffolds and results obtained from cell culture studies. Additionally, all counterarguments are explored and discussed in detail throughout the article, providing a comprehensive overview of both positive and negative aspects associated with this technology.

The article does not contain any promotional content or partiality towards either side of an argument; instead it provides an unbiased overview of wheat glutenin as a material for 3D porous scaffolds for cultured meat applications. Furthermore, possible risks associated with this technology are noted throughout the article, such as potential toxicity issues due to crosslinkers used during production processes which do not have FDA GRAS status. Finally, both sides of an argument are presented equally throughout the article; no opinion is favored over another when discussing potential benefits or drawbacks associated with this technology.

# Topics for further research:

* Cultivated meat applications
* Wheat glutenin scaffolds
* Physical cross-linking methods
* Water annealing process
* Pore size optimization
* FDA GRAS status

# Report location:

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