

A Thinkful of “Alginate Beads as a Promising Tool for Successful Production of Viable and Pluripotent Human-Induced Pluripotent Stem Cells in a 3D Culture System” [Letter]

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Dear editor

We have read the published article, and we appreciate the authors who have reported the article about “Alginate Beads as a Promising Tool for Successful Production of Viable and Pluripotent Human-Induced Pluripotent Stem Cells in a 3D Culture System”, published in *Stem Cells and Cloning: Advances and Applications* s 2023;16:61–73. We appreciate the success of Alsobaie et al in carrying out 3D culture using the encapsulation technique with alginate and gelatin on induced pluripotent cell/iPSCs so that they can suppress their teratoma properties.¹

The encapsulation process is carried out on stem cells such as induced pluripotent cell/iPSC and mesenchymal stem cell/MSK to make them more stable, resistant to temperature and maintain their viability.^{1,2} Previous research has shown the antibacterial hydrogel was able to kill approximately 99% of the exposed bacteria after 3 h of exposure. The developed antibacterial hydrogels are light weight, have a high water-uptake capacity, and show high biocompatibility with the model mammalian cells, which make them a promising candidate to be used for wound dressing applications.³

This study directly Human iPSCs under dynamic 3D culture were able to secrete the necessary ECM components to form a suitable niche, which might help to maintain the pluripotent state. Meanwhile, in our opinion, it is also necessary to mention Dynamic 3D culture is desirable for the large-scale expansion of undifferentiated human iPSCs for what therapy or research expansion applications. We suggest using encapsulated herbs such as lemongrass and various herbs to protect cell DNA when large-scale expansion is carried out.⁴

Disclosure

The authors report no conflicts of interest in this communication.

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