

# 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]

Rilianawati<sup>1</sup>, Ratih Rinendyaputri<sup>2,3</sup>, Yoggi Ramadhani Purwaningtyas<sup>1b</sup><sup>2</sup>

<sup>1</sup>Vaccine and Drug Research Center, National Research and Innovation Agency, Serpong, Indonesia; <sup>2</sup>Center for Biomedical Research, Research Organization for Health, National Research and Innovation Agency, Bogor, Indonesia; <sup>3</sup>Graduate School of Biomedical, Sciences, Doctoral Program, Faculty of Medicine, Universitas Padjadjaran, Bandung, Indonesia

Correspondence: Rilianawati, Email rili001@brin.go.id

## 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.<sup>1</sup>

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.<sup>1,2</sup> 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.<sup>3</sup>

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.<sup>4</sup>

## Disclosure

The authors report no conflicts of interest in this communication.

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