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## 3D CULTURE OF RABBIT BONE MARROW MESENCHYMAL STEM CELLS USING MICROCARRIER BEADS IN SPIN CULTURE



### ▶ TECHNOLOGY OVERVIEW

The present invention provides a method of isolating mesenchymal stem cells derived from bone marrow of rabbit which were then precharacterized before the expansion of mesenchymal stem cells. The precharacterized mesenchymal stem cells with the preservation of its mesenchymal markers and differentiation potential were expanded by using the combination of stirred culture environment and the commercially available Cytodex type 1 microcarrier beads. The cell yield of mesenchymal stem cells grown in conventional culture flasks are poor as such plastic surfaces only permit two-dimensional (2D) expansion and the cell expansion is limited but in the present invention, the positively charged Cytodex type 1 microcarrier are able to promote cell expansion three-dimensional through its necessary cell-matrix attachment and proliferation of the mesenchymal stem cells in stirred culture environment provides an alternative cell culture method to monolayer system.

### CONTACT US!

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### ▶ MORE INFORMATION

#### MEGA-TREND

- Innovative Technologies of the Future
- Healthcare
- Chemicals and Materials

#### TECHNOLOGY READINESS LEVEL (TRL)

- TRL 4 (Lab Prototype - Lab Testing)

#### PATENT/ GRANTED NUMBER

- MY-177429-A