Cell-containing three-dimensional porous cell carrier manufacturing method and cell-containing three-dimensional porous cell carrier manufactured by such method

Published date: June 1, 2017

Technology description

The invention relates to a method for manufacturing a three-dimensional porous cell carrier containing cells and the related contents of a three-dimensional porous cell carrier containing cells.
According to the invention, the cell carrier is made by combining the rapid prototyping process with the ultra-low temperature system and utilizing the natural polymer with low viscosity. In this process, the problems in the existing process methods are solved by freezing the natural polymers with low viscosity. As a result, a cell carrier with 3D stomatal morphology was made, which made the cells enter the same volume and had 3D stomatal morphology.
The cell carrier is three-dimensional structure, very stable; large pores, 100% connected between pores; continue to provide oxygen and nutrients for cell survival and growth. Therefore, the cells have a higher survival rate of 70%. There is no need for cell injection and other processes, only according to the characteristics of the cell carrier for cultivation. In the future, the use of their own cells, in the course of surgery, to make a cell carrier in line with the condition of the patient. The cell carrier is preserved by freezing management, and when needed in the future, the cell carrier can be thawed and can be used. Therefore, a very good cell carrier for medical tissue regeneration can be made by this method.

Application area

Preparation of Three-dimensional Porous Cell Carriers

Institution

Sungkyunkwan University

联系我们

叶先生

电 话：021-65679356

手 机：13414935137

邮 箱：yeyingsheng@zf-ym.com