United States Patent [19]

Mears

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[54] **REGENERATION OF LIVING TISSUES BY GROWTH OF ISOLATED CELLS IN POROUS IMPLANT AND PRODUCT THEREOF**

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[58] **Field of Search** ..... 128/92 G; 3/1.9, 1

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[57] **ABSTRACT**

A method of repair of patient tissues by implant including providing a living cell sample which is introduced into an implant member having a porous open structure. The cell sample may be cultured in the implant. The implant is secured to the patient, as by surgical implantation. In one embodiment, the implant portion which receives the cells preferably has a pore size of about 25 to 75 microns. In addition, a second pore size of about 100 to 400 microns for receipt of blood vessels and osteogenus cells through ingrowth after introduction into the patient, may be provided. The cell sample may advantageously be selected from the group consisting of cartilage cells, tendon cells, ligament cells and musculotendinous cells. The implant member may be advantageously used in bone or joint reconstruction surgery and in other forms such as artificial tooth implantation.

A surgical implant comprising an inert member having, in one embodiment, a first series of open pores of an average size of about 25 to 75 microns and a second series of open pores of an average size of about 100 to 400 microns with patient cells growing within the pores.

2 Claims, 6 Drawing Figures