PUBLIC INSTITUTION
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METHOD OF ISOLATION OF CELL CULTURES
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Invenţia se referă la ingineria tisulară şi poate fi utilizată pentru izolarea culturilor celulare predestinate transplantării sau testării in vitro a diferitor compuşi sau substanţe. Metodă de izolare a culturilor celulare constă în obținerea culturilor celulare din explant prin manipularea cu volumul de mediu de nutriție pe parcursul a mai multe cicluri de izolare celulară.

Avantajele metodei constau în prevenirea contaminării vasului pentru cultura celulară, lipsa necestăţii de utilizare a unor reactivi suplimentari costisitori, aderarea fermă a ţesutului la suprafaţa de cultură celulară fără riscul detaşării şi izolarea stabilă a unui număr mare de celule într-o perioadă scurtă de timp dintr-o cantitate mică de ţesut în cadrul unei proceduri.

Domeniu de aplicare: inginerie tisulară

The invention relates to tissue engineering and can be used for isolating cell cultures intended for transplantation or testing of various compounds or substances in vitro.

The method of isolation of cell cultures consists in obtaining of cell cultures from explant by manipulation of the volume of the nutrient medium over several cycles of cell isolation.

The advantages of the method are to prevent the contamination of the vessel for cell culture, the lack of need to use expensive additional reagents, the firm adhesion of the tissue to the cell culture surface without the risk of detachment and the stable isolation of a large number of cells in a short time of a small amount of tissue in a procedure.

Fields of application: tissue engineering

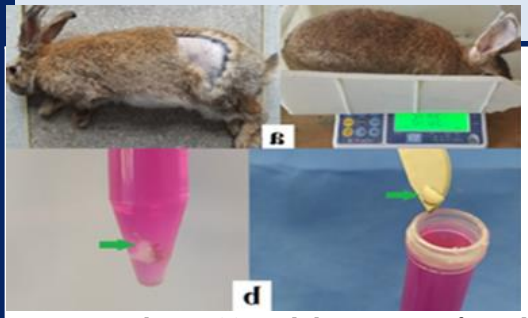

Fig.1 anesthesia (a) and harvesting of small piece of derma (green arrow) from rabbit (b).

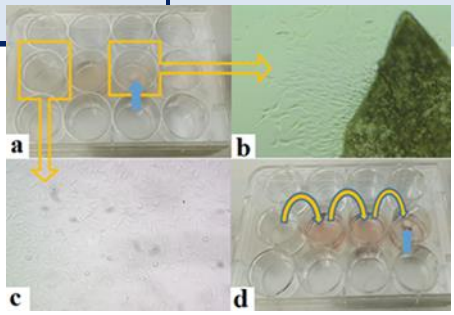

Fig. 2. Explant (blue arrow) transfer from a well of 12 well plate to another (yellow inflected arrow) during fibroblast isolation by cycles of volumetric regulation. The explant adherence in 3rd cycle of volumetric regulation for fibroblast isolation (a), the adhered explant and the fibroblasts migrated from it (b), 70-80% cellular confluency after explant extraction, (d) initiation of 4th cycle for fibroblasts isolation

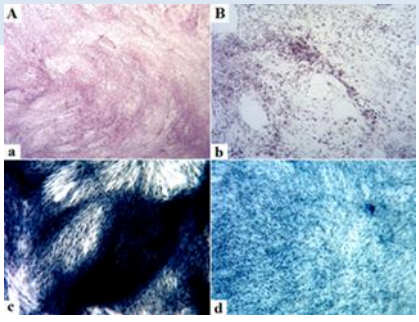

Fig. 3. Fibroblasts identification of isolated cells (A) cultured in over confluence for 21 days, MSC used as control (B). The isolated cells are stained in red with Hematoxylin-Eosin (a) and deep blue by Masson Trichrome (c). The specific staining of control is absent (b and d).

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