

## Title (en)

THREE-DIMENSIONAL HUMAN CELL CULTURES ON CARDIAC VALVE FRAMEWORKS AND THEIR USES

## Title (de)

DREIDIMENSIONALE KULTUREN VON MENSCHLICHEN ZELLEN AUF HERZKLAPPENGERÜST UND IHREVERWENDUNG

## Title (fr)

CULTURES TRIDIMENSIONNELLES DE CELLULES HUMAINES SUR DES STRUCTURES DE VALVULES CARDIAQUES, ET LEURS UTILISATIONS

## Publication

**EP 0781116 A4 19990825 (EN)**

## Application

**EP 95933062 A 19950908**

## Priority

- US 9511395 W 19950908
- US 30406294 A 19940912
- US 48816595 A 19950607

## Abstract (en)

[origin: WO9608213A1] The present invention relates to a method of growing a variety of different cells and tissues in three-dimensional cultures in vitro using human fibroblasts in the culture medium. In accordance with the invention, stromal cells, including but not limited to human dermal and cardiac fibroblasts, are inoculated and grown on a three-dimensional scaffold or framework. The human fibroblasts secrete human matrix proteins to supplement and replace the existing porcine matrix composed of decellularized heart valves or aortic walls and leaflets formed into three-dimensional constructs having interstitial spaces bridged by the stromal cells. The living stromal tissue so formed provides the support, growth factors, and regulatory factors necessary to sustain long-term viability and proliferation of cells in culture and/or cultures implanted in vivo. When grown in this three-dimensional system, the proliferating cells mature and segregate properly to form components of tissues analogous to counterparts in vivo.

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## IPC 8 full level

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## Citation (search report)

- [X] EP 0358506 A2 19900314 - MARROW TECH INC [US]
- [X] WO 9215259 A1 19920917 - UNIV COLORADO STATE RES FOUND [US]
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- [A] US 5041138 A 19910820 - VACANTI JOSEPH P [US], et al
- See references of WO 9608213A1

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## DOCDB simple family (application)

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