Title (en)

PROGRAMMED-RELEASE, NANOSTRUCTURED BIOLOGICAL CONSTRUCT FOR STIMULATING CELLULAR ENGRAFTMENT FOR TISSUE REGENERATION

Title (de)

BIOLOGISCHES KONSTRUKT MIT NANOSTRUKTUR UND PROGRAMMIERTER FREISETZUNG ZUR STIMULIERUNG DES ANWACHSENS VON ZELLEN ZUR GEWEBEREGENERATION

Title (fr)

CONSTRUCTION BIOLOGIQUE NANOSTRUCTURÉE À LIBÉRATION PROGRAMMÉE EN VUE DE LA STIMULATION DE GREFFE CELLULAIRE POUR LA RÉGÉNÉRATION TISSULAIRE

Publication

EP 2282718 A2 20110216 (EN)

Application

EP 09734987 A 20090305

Priority

- US 2009036117 W 20090305
- US 15032908 A 20080425
- US 22113908 A 20080731

Abstract (en)

[origin: WO2009131752A2] A biologically engineered construct comprising of a polymeric biomatrix (100), designed with a nanophase texture (106), and a therapeutic agent (104 or 300) for the purpose of tissue regeneration and/or controlled delivery of regenerative factors and therapeutic substances after it is implanted into tissues, vessels, or luminal structures within the body. The therapeutic agent (104 or 300) may be a therapeutic substance (104) or a biological agent (300), such as antibodies, ligands, or living cells. The nanophase construct is designed to maximize lumen size, promote tissue remodeling, and ultimately make the implant more biologically compatible. The nano-textured polymeric biomatrix (100) may comprise one or more layers containing therapeutic substances (104) and/or beneficial biological agents (300) for the purpose of controlled, physiological, differential substance/drug delivery into the luminal and abluminal surfaces of the vessel or lumen, and the attraction of target molecules/cells that will regenerate functional tissue. The topographic and biocompatible features of this layered biological construct provides an optimal environment for tissue regeneration along with a pro grammed -release, drug delivery system to improve physiological tolerance of the implant, and to maximize the cellular survival, migration, and integration within the implanted tissues.

IPC 8 full level

A61K 9/00 (2006.01); **A61F 2/04** (2006.01); **A61K 39/395** (2006.01)

CPC (source: EP)

A61K 9/0014 (2013.01); **A61K 9/0024** (2013.01); **A61K 9/0051** (2013.01); **A61K 9/0085** (2013.01); **A61K 9/1641** (2013.01); **A61K 9/1647** (2013.01); **A61K 9/1652** (2013.01); **A61K 9/1658** (2013.01); **A61K 9/167** (2013.01); **A61L 27/26** (2013.01); **A61L 27/54** (2013.01); A61L 2300/256 (2013.01); A61L 2300/414 (2013.01); A61L 2300/426 (2013.01); A61L 2300/61 (2013.01); A61L 2300/624 (2013.01); A61L 2300/64 (2013.01); A61L 2400/12 (2013.01)

Citation (search report)

See references of WO 2009131752A2

Designated contracting state (EPC)

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