

Title (en)
TRANSMURAL DRUG DELIVERY METHOD AND APPARATUS

Title (de)
VERFAHREN ZUR TRANSMURALEN WIRKSTOFFDAREICHUNG UND APPARAT

Title (fr)
PROCEDE ET APPAREIL D'ADMINISTRATION TRANSMURALE DE MEDICAMENTS

Publication
EP 0949910 A4 20010117 (EN)

Application
EP 97936444 A 19970807

Priority

- US 9713904 W 19970807
- US 2374396 P 19960808
- US 90699197 A 19970806

Abstract (en)

[origin: WO9805307A1] A transmural drug delivery method broadly includes the steps of forming a channel through a tissue surface into the tissue and introducing a drug into the channel. A preferred method promotes myocardial angiogenesis by first forming endocardial channels (32) through the endocardium (30) from within the left ventricle (26) and then introducing angiogenic factors into the channel to promote growth of new arterioles (34) within the myocardium (24). The new arterioles connect the channels to each other, to the coronary arteries (36) and grow in the myocardium itself. Doing so supplies the blood from the left ventricle directly to the myocardium and may also provide flow paths around blockages (47) in the coronary arteries to lessen or eliminate myocardial ischemia. The invention can also be used to introduce other agents into myocardial tissue and into the tissue of other organs.

IPC 1-7
A61K 9/22; **A61M 25/00**; **A61K 38/18**

IPC 8 full level
A61B 18/24 (2006.01); **A61K 38/18** (2006.01); **A61B 17/00** (2006.01)

CPC (source: EP)
A61B 18/24 (2013.01); **A61K 38/1825** (2013.01); **A61K 38/1866** (2013.01); **A61B 2017/00247** (2013.01); **A61B 2018/00392** (2013.01)

Citation (search report)

- [DPXPY] WO 9723256 A1 19970703 - LOCALMED INC [US], et al
- [A] US 4699788 A 19871013 - CATSIMPOOLAS NICHOLAS [US], et al
- [DY] WALTER ET AL: "TREATMENT OF ACUTE MYOCARDIAL INFARCTION BY TRANSMURAL BLOOD SUPPLY FROM THE VENTRICULAR CAVITY", EUROPEAN SURGICAL RESEARCH, vol. 3, 1971, pages 130 - 8, XP000943188
- [DA] HARADA K ET AL: "BASIC FIBROBLAST GROWTH FACTOR IMPROVES MYOCARDIAL FUNCTION IN CHRONICALLY ISCHEMIC PORCINE HEARTS", JOURNAL OF CLINICAL INVESTIGATION,US,NEW YORK, NY, vol. 94, no. 2, 1 August 1994 (1994-08-01), pages 623 - 630, XP002043081, ISSN: 0021-9738
- See references of WO 9805307A1

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
WO 9805307 A1 19980212; AU 3911097 A 19980225; EP 0949910 A1 19991020; EP 0949910 A4 20010117

DOCDB simple family (application)
US 9713904 W 19970807; AU 3911097 A 19970807; EP 97936444 A 19970807