PROGENITOR ENDOTHELIAL CELL CAPTURING WITH A DRUG ELUTING IMPLANTABLE MEDICAL DEVICE

ABSTRACT

A medical device for implantation into vessels or luminal structures within the body is provided, which stimulates positive blood vessel remodeling. The medical device, such as a stent and a synthetic graft, is coated with a pharmaceutical composition consisting of a controlled-release matrix and one or more pharmaceutical substances for direct delivery of drugs to surrounding tissues. The coating on the medical device further comprises a ligand such as a peptide, an antibody or a small molecule for capturing progenitor endothelial cells in the blood contacting surface of the device for restoring an endothelium at the site of injury. In particular, the drug-coated stents are for use, for example, in balloon angioplasty procedures for preventing or inhibiting restenosis.

FIG. 1A