FORMULATION TO PREVENT AND TO TREAT RESTENOSIS

The number of patients suffering from vascular occlusive disease requiring revascularization is increasing. About 50% of vein grafts fail during the first two years post implantation related to intimal hyperplasia (IH) resulting in the lumen graft’s occlusion.

In endovascular approach, the recent use of “drug eluting stents” has proven how drugs such as paclitaxel (PTX) play a major role in the prevention of restenosis.

But in open surgery, which is still the gold standard, no local treatment applied during the surgery to prevent and to treat stenosis has been identified and developed. Clearly there is still a need in open surgery to identified a local delivery system of drugs would allow a more efficient drug activity with fewer side effects.

DESCRIPTION

The inventors have identified and developed a biphasic microparticles-gel formulation for perivascular statin delivery. This new and inventive local delivery system of drugs may be advantageously used in open surgery.

STAGE OF DEVELOPMENT

Inventors have demonstrated the efficacy of this new delivery system in a Carotid Artery Ligation (CAL) mice model. They have completed these results with an in vitro evaluation of efficiency on primary human vascular smooth muscle cells (VSMC).

They currently test it on larger animals (pig) undergoing bypass operation.

ADVANTAGES

This delivery system allows an inhibition of expansive remodeling and IH in arterialized vein graft.

By fostering the application of a local drug delivery system, the inventors limit the side effects of oral administration of the drugs.

INTELLECTUAL PROPERTY

Priority date: March 27th, 2013.


COLLABORATION TYPE

PACTT offers to grant exclusive or non-exclusive license to industrial partners able to develop and commercialize the technology.

REFERENCE

IDF 12/10