Perivascular Drug Delivery System Inhibits Restenosis

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a perivascular delivery system and method for preventing and treating restenotic disease.

OVERVIEW

Restenosis (re-narrowing of the blood vessel) frequently develops after surgical interventions such as bypass. Although this process is well understood and restenosis inhibitors are available, it has been difficult to treat due to a lack of effective drug delivery systems.

For open surgical procedures like bypass, there exists no accepted clinical drug delivery system for perivascular (outside the vessel) application. Approaches like polymer gel depots, wraps/films and meshes lack efficacy, are not biodegradable and can cause mechanical stress to the blood vessel.

THE INVENTION

UW–Madison researchers have developed a new device and method for perivascular delivery of drugs to treat and prevent restenosis.

The device consists of a sheath made from a bioresorbable polymer. An anti-proliferative drug is loaded into the sheath. When the sheath is placed around the outside of the blood vessel, the drug is delivered to the vessel over time.

APPLICATIONS

• Post-bypass management, perivascular treatment and prevention of intimal hyperplasia and restenosis
• Dialysis access

KEY BENEFITS

Since its founding in 1925 as the patenting and licensing organization for the University of Wisconsin-Madison, WARF has been working with business and industry to transform university research into products that benefit society. WARF intellectual property managers and licensing staff members are leaders in the field of university-based technology transfer. They are familiar with the intricacies of patenting, have worked with researchers in relevant disciplines, understand industries and markets, and have negotiated innovative licensing strategies to meet the individual needs of business clients.
• Allows for in vivo, controlled release of anti-proliferative drugs
• Lowers need for additional interventions that may worsen restenosis
• Enables linear drug release, depending on the sheath composition
• Biodegradable and durable
• Perivascular and non-disruptive; placement does not place mechanical stress on blood vessels

ADDITIONAL INFORMATION

Related Technologies
For information about treating restenosis using a combination of insulin and connective tissue growth factor, see WARF reference number P120330US02.

Publications


Tech Fields
Medical Devices - Drug delivery

CONTACT INFORMATION

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846.