

Dublin City University Licensing Opportunity

LIFE SCIENCES

Enduragel - a Novel Therapeutic Filling Material for Treatment of Cerebral Aneurysms

INTRODUCTION

The Biomaterials Research Group in DCU have created a novel, innovative, patented technology, Enduragel, which is an injectable hydrogel for the treatment of brain aneurysms and other vascular problems such as Arteriovenous Malformations (AVMs) and dural fistulas.

BACKGROUND

It is estimated that approximately 1 in 50 people have a brain aneurysm, many unaware of their presence. A brain aneurysm is a localised dilation (bulge) of a blood vessel surrounding the brain. If untreated, the aneurysm can rupture causing bleeding into the brain. This often results in severe disability or death. It is estimated that approximately 700,000 people globally experience an aneurysm rupture each year. The current gold standard for the treatment of cerebral aneurysms is to either carry out a craniotomy (open brain surgery), placing a metal clip at the aneurysm neck or navigating a fine platinum coil through the arteries and into the aneurysm space. The former approach carries a risk of infection and scarring. The latter approach, though preferable in most cases, results in poor closure of the aneurysm (less than 50%) and continued opening of the aneurysm is common (up to 21.5% of cases).

TECHNOLOGY DESCRIPTION

The team at DCU have developed a minimally invasive hydrogel, which can be injected through small tubes (micro-catheters) which are navigated through the vasculature from the groin and up to the brain. The technology utilises small microbeads to control the setting reaction within a hydrogel (~80% water). These formulations are designed to maintain a low viscosity (thin) gel, which can be injected through small micro-catheters, while precisely controlling the crosslinking reaction rate of the hydrogel, allowing it to be delivered to the aneurysm as a thick, cohesive and adherent hydrogel, which almost completely fills aneurysms of varied shape and size. Once the hydrogel is injected into the aneurysm, it hardens, closing the aneurysm and preventing blood ingress and continued expansion. The project team hopes that this novel hydrogel technology will improve the clinical outcomes of patients with cerebral aneurysms and allow doctors to treat aneurysms which are currently untreatable.

RESEARCH AND IP STATUS

Patent application filed in 2014 and published as WO2016055650

TYPE OF BUSINESS SOUGHT

Available for licensing. We are also interested to talk to companies interested in collaborations and strategic partnerships.

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