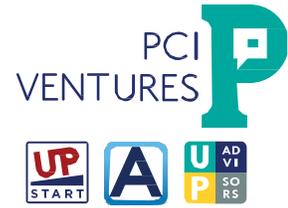




prohibix



Company Overview

Spun-out of the Department of Bioengineering at the University of Pennsylvania in 2014, Prohibix is developing an injectable hydrogel-based platform drug delivery technology that targets a critical mediator of many diseases including cardiovascular disease, osteoarthritis, and chronic ulcers.

Problem

Matrix metalloproteinases (MMPs) are a class of protein-degrading enzymes that are overexpressed in many human diseases including cardiovascular disease, osteoarthritis and chronic ulcers. Excessive levels of MMP activity cause permanent, adverse changes to tissue structure, ultimately contributing to disease progression. Millions of people in the US currently suffer from the debilitating diseases characterized by MMP overexpression. To address this unmet clinical need, the design and development of molecules that inhibit MMP activity has been widely explored over the past 25 years. Despite progress in generating potent MMP inhibiting molecules, none have translated to clinical application due to the dose-limiting side effects of the drugs following systemic administration.

Solution

Prohibix has developed a novel injectable hydrogel technology that allows MMP inhibitors to be delivered locally to diseased tissue and released in response to MMP activity. While typical hydrogel based technologies release an encapsulated molecule in a passive manner, our patent pending technology allows molecule release to be controlled by local MMP activity. Therefore, MMP inhibitors are released in proportion to MMP activity to effectively inhibit disease progression while avoiding unwanted off-target effects. This platform technology has the potential to revitalize the development of MMP inhibitors in order to treat patients who suffer from one of the many MMP related diseases. Considering the overwhelming burden that MMP related diseases place on the US healthcare system, along with the library of shelved MMP inhibitors, our technology has a strong value proposition for patients, payers, providers and the pharmaceutical industry.

Team Information

Initial intellectual property for Prohibix was invented in the laboratory of Professor Jason Burdick, PhD at the University of Pennsylvania. Dr. Burdick is a world-renowned expert in biomaterials development and therapeutic application. Dr. Burdick founded Prohibix with Brendan Purcell, PhD while Dr. Purcell was a post-doctoral researcher in the Burdick Laboratory. Dr. Purcell is an expert in developing injectable hydrogels for controlled delivery of therapeutic molecules.

Contact:
Michael Dishowitz
Associate, PCI Ventures
University of Pennsylvania
dishowit@upenn.edu
215.573.6571