MOFgen – Nanoporous Materials for Wound Healing
Professor Russell Morris, University of St Andrews, Brian Mercer Award for Innovation 2012 and Industry Fellow 2011 – 14

Introduction
Chronic wound healing is a major issue in current healthcare. Wounds that do not heal are often infected with biofilms, a particularly difficult form of bacterial infection that are extremely resistant to antibiotics. We are developing a new wound healing technology based on the delivery of a powerful anti-biofilm agent, nitric oxide (NO), using a new type of nanoporous material called metal-organic frameworks (MOFs). MOFs are cheap to prepare and formulate (compared to many other advanced wound healing products) and can be used to precisely control the delivery of NO leading to highly effective anti-biofilm agents and a new generation of wound healing products.

MOFgen Ltd is a University of St Andrews spin-out company that aims to develop MOF-based technology for several different applications. We develop the manufacture, formulation and applications of MOFs in healthcare and consumer applications.

My Brian Mercer Award has allowed us to develop our MOF technology significantly over the last few months. The prestige associated with the award has been instrumental in opening doors to potential partners and customers. My industry Fellowship is to work with Sasol Technology UK, a global fuel and chemicals company with a significant interest in porous materials, deepening my interest in how fundamental research is translated into the commercial sector.