



## University of Edinburgh Collaboration Aims to Treat Severe Acute Pancreatitis

Severe acute pancreatitis is a devastating condition caused by inflammation of the pancreas. It causes extremely severe abdominal pain. Most patients seek medical attention following the onset of attack, usually at an emergency department. In the majority of cases, the inflammation in the pancreas is self-limiting, and the pain resolves within 24 to 36 hours. However, for the remaining 20 to 30 percent of patients, a systemic inflammatory response activates inflammatory processes in other organs such as the lungs and kidneys resulting in multiple organ dysfunction. This leads to a prolonged stay in intensive care with a mortality rate of approximately 20 percent. Despite this high unmet need and the high burden on the intensive care system, there are no effective specific treatments available. The current standard of care is purely supportive.

Mr. Damian Mole is a clinician scientist fellow and consultant surgeon at the University of Edinburgh. He has devoted his research efforts to try and unravel the underlying biology causing severe acute pancreatitis.

“On the whole, doctors aren’t particularly comfortable dealing with acute pancreatitis,” said Mole. “As professionals, doctors generally prefer managing diseases which are predictable, have effective treatments, and for which we understand the disease biology. At the moment, none of these really applies in pancreatitis.”

Mr. Mole believes if drugs can be developed that block or alter the inflammatory mechanisms that lead to organ failure, the damage caused by acute pancreatitis can be limited. This will help reduce the number of patients who end up in intensive care, and improve their long-term outlook.

Based on initial experiments, Mole and colleagues identified an inflammatory mechanism in acute pancreatitis associated with the development of multiple organ failure. To develop this idea into a potential medicine, he started a research program with seed funding from the the Health Foundation, the Academy of Medical Sciences, the Medical Research Council and the Wellcome Trust. Through pilot studies, Mr. Mole and his colleague, Dr. Scott Webster, showed that targeting this pathway early in the course of disease might have beneficial effects with respect to organ dysfunction.

### The power of teaming up for discovery

That’s when GSK’s Discovery Partnerships with Academia (DPAc) team entered the picture. After an event hosted by the University of Edinburgh’s BioQuarter, the DPAC team invited academics to submit a short research proposal



**Damian Mole**  
University of Edinburgh

detailing their therapeutic hypothesis. Mole and Webster seized the opportunity. GSK liked their therapeutic hypothesis and believed that the biological target was chemically tractable.

In late 2011, University of Edinburgh scientists signed an agreement with the DPAC team. Under the agreement terms, the University of Edinburgh receives milestone-based financial support from GSK and sales royalties from any medicine commercialized as a result of the collaboration.

Mr. Mole values his DPAC collaboration in many ways, including how it’s helped him and his team to think about ways to translate academic findings into potential new medicines. He values the fact that DPAC’s experts keep everyone’s focus on the ultimate aim, delivering medicines to patients.

“It’s great working with a (DPAC) team that always keeps the goal very much on the middle of the table,” said Mole.

He’s also delighted to be part of a team where every one brings their own unique skillset and knowledgebase.

“It’s extremely rewarding to be part of this collaboration (with GSK) and it’s a great working environment,” said Mole. “Everyone on our DPAC team is really good at what they do. I feel privileged to be part of it.”