Kenneth Warren Fellowship 2013 Annual Report

I would like to thank the International Hepato-Pancreato-Biliary Association's Research Committee for awarding the 2013 Kenneth Warren Fellowship for my study entitled "*Modulating Hepatic Blood Flow after Major Hepatectomy*". An award that has made it possible for me to work with Professor Arthur Revhaug and Dr Kim Mortensen at their world-class unit at the University Hospital of North Norway in Tromsø.

The study sets out to characterise the pathophysiology of small-for-size syndrome after major liver resection. In the majority of patients liver resection can be performed safely with low morbidity and mortality, but in a growing subgroup of patients undergoing extended resection the risk of post-resection liver failure remains significant.

Post-resection liver failure is a devastating complication that is resource intensive and carries with it considerable morbidity and mortality. The pathophysiology of post-resection liver failure remains poorly understood. Haemodynamic changes which follow liver resection may induce a small-for-size syndrome in the liver remnant, whilst other factors including sepsis and ischaemia-reperfusion injury may precipitate or exacerbate post-resection liver failure.

Currently there are few treatments available for post-resection liver failure, with most strategies derived from studies of acute liver failure secondary to toxic rather than surgical liver injury. The development of experimental models for small-for-size syndrome will provide both mechanistic insight and the opportunity to explore novel therapeutic approaches.

In the first six months I have validated the experimental model of small-for-size and undertaken the first set of acute studies to modulate hepatic blood flow with the aim of attenuating the negative consequences of small-for-size in the liver remnant. Chronic studies will start in autumn 2013. I look forward to presenting the completed study at the IHPBA clinical Congress in Seoul 2014.

John Stotesbury Hammond