



Professor LAI Bo San Paul Hepatobiliary and Pancreatic Surgery

## **Projects for Postgraduate Students**

## Surgical Outcome Monitoring and Improvement

Development and implementation of monitoring and reporting system in surgical outcome improvement in public hospital in Hong Kong, eg post-procedure complication monitoring program, use of mortality risk calculator in emergency surgery and use of Variable Life-adjusted Display in early signal monitoring system.

## Hepatocellular carcinoma and female hormones

Hepatocellular carcinoma (HCC) occurs predominantly in males, suggesting a protective role of female hormones in the development of HCC. Our recent study has found that estrogen metabolites could induce the death of HCC cells, however, the level of the estrogen metabolites were reduced in HCC, indicating that a defect in estrogen metabolism may contribute to the hepatocarcinogenesis. We are currently exploring the details how estrogen metabolism defect affects liver oncogenic molecules and its significance in the potential therapy of HCC.

## **❖** ZBP-89 and hypoxia in hepatocellular carcinoma

Our previous study has demonstrated a pro-apoptotic role of ZBP-89, a Kruppel-type zinc-finger transcription factor, in HCC. Further studies have suggested that the function of ZBP-89 in HCC may be associated with hypoxic-induced factors. Hypoxic-induced factors are well-known to play a role in HCC development and treatments. However, the interaction between hypoxic-induced factors and ZBP-89 is unknown. We believe, the study in this area will generate some novel and useful data for the pathogenesis and treatments of HCC.